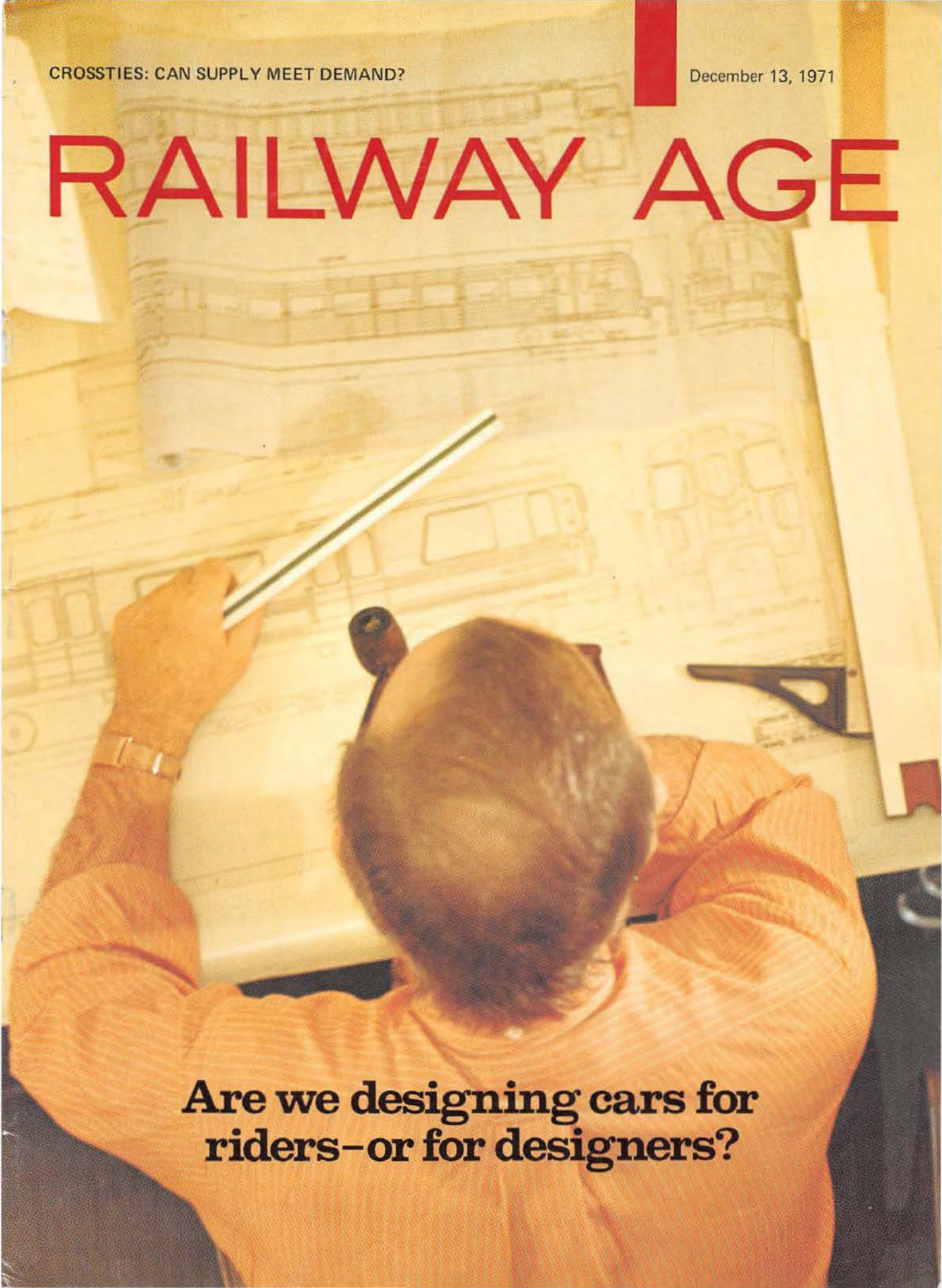
CROSSTIES: CAN SUPPLY MEET DEMAND?

December 13, 1971

# RAILWAY AGE



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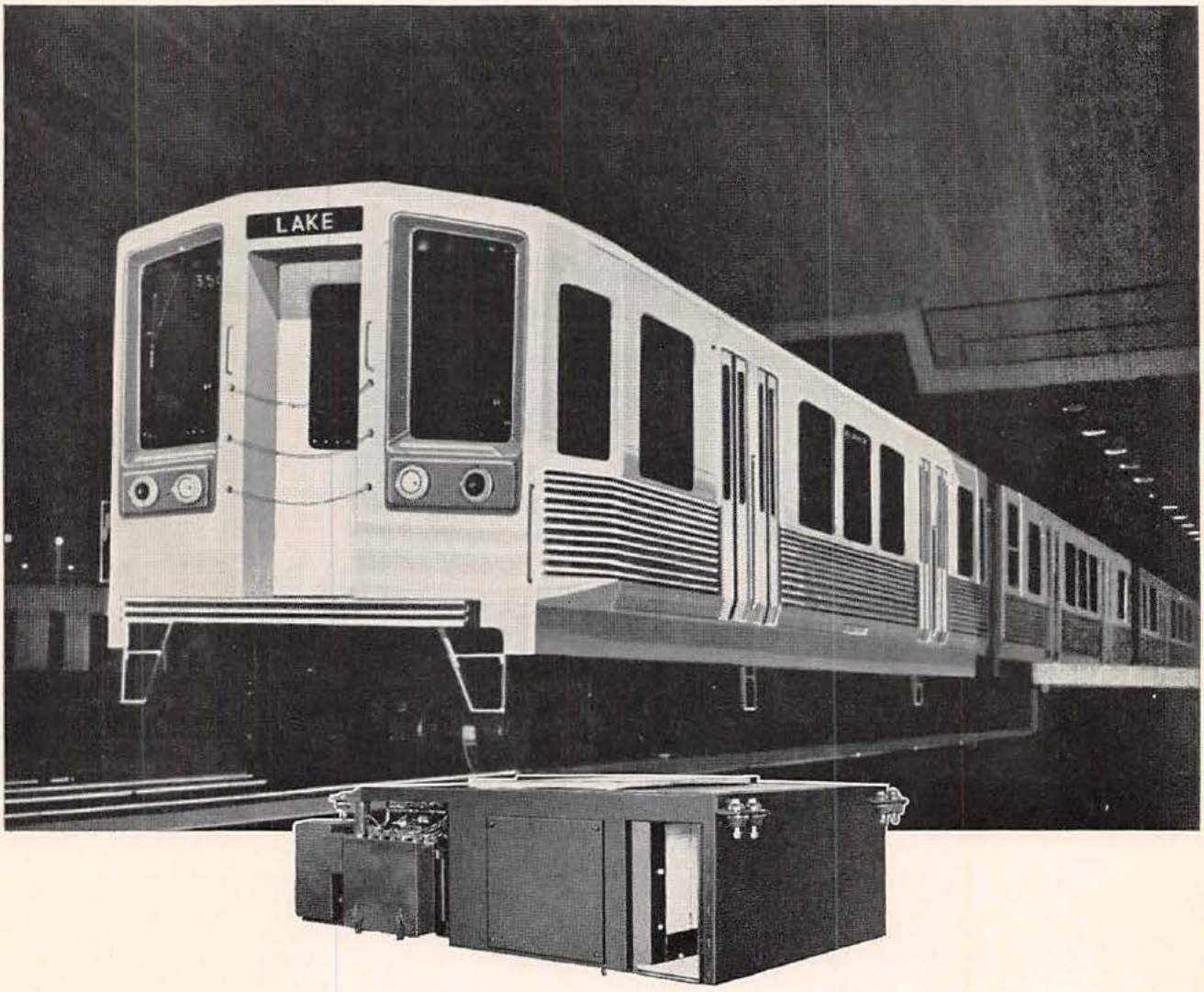


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RAILWAY AGE

December 13, 1971 • Vol. 171 No. 11

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# Inside

LUTHER MILLER

## CONSULTING THE CONSULTANTS

"Saul Alinsky [writes Editor Fred Houser in a lead editorial in Railway Locomotives and Cars] once observed that a sociologist is a man who can spend a lot of time and grant money establishing the location of whorehouses, all of which any taxi driver could point out in five minutes. Sometimes, it would seem, the same sort of observations might be made of the 'expertise' of some of the railroad industry's consultants."

Fred went on to quote Penn Central's chief mechanical officer, J. M. McGuigan, to the effect that it may be time to "put the brakes on the many consultants who, in their eagerness to please the Federal and local agencies, have introduced complexity beyond all reason."

The editorial was a timely one. The industry has been buzzing in recent months with talk, pro and con, over the role of the consultant in car design. The buzz became a roar when streetcar specs drawn up for the San Francisco Muni attracted bids of close to half a million dollars per car.

For this issue's cover story on this touchy subject, Joe Asher turned the tables and consulted the consultants. He also talked with the people who hire the consultants and those who must convert the consultants' specs into hardware.

He found the picture not to be as black as some paint it; nor was it as pure as the driven snow. His report starts on page 19.

## THE "STORYBOOK TRAIN"

At ten minutes past 8 p.m. on Monday, Dec. 6, the first Auto-Train eased out of Lorton, Va. in a cold drizzle; 875 minutes (and 870 miles) later the "Storybook Train" as the next day's editions of the Orlando Sentinel dubbed it, rolled into Sanford, Fla., in a blaze of sunshine and publicity, fifteen minutes ahead of schedule, having achieved an average speed of almost 60 mph. In its stunning red, white and purple livery, the train was something to rival the best to be seen at Disney World (the destination of many of the 100-odd inaugural-run passengers). Its elegance was matched by its efficiency. The dozen hostesses were pretty and friendly. The Marriott-catered lobster and Beef Wellington (on the house, as was a continental breakfast the next morning) was satisfying. Jet-setter Ruth Hugh was taking her first train ride to Florida. "I'll never take a jet again," she said. About 1,000 Floridians were on hand to greet the inaugural train, including retired Pennsylvania conductor George W. Hartman, who commented: "The only thing we ever saw like this in my day was when Barnum & Bailey came to town." The train that so impressed Miss Hugh and Mr. Hartman is described by Bob Bartley in the story beginning on page 24.

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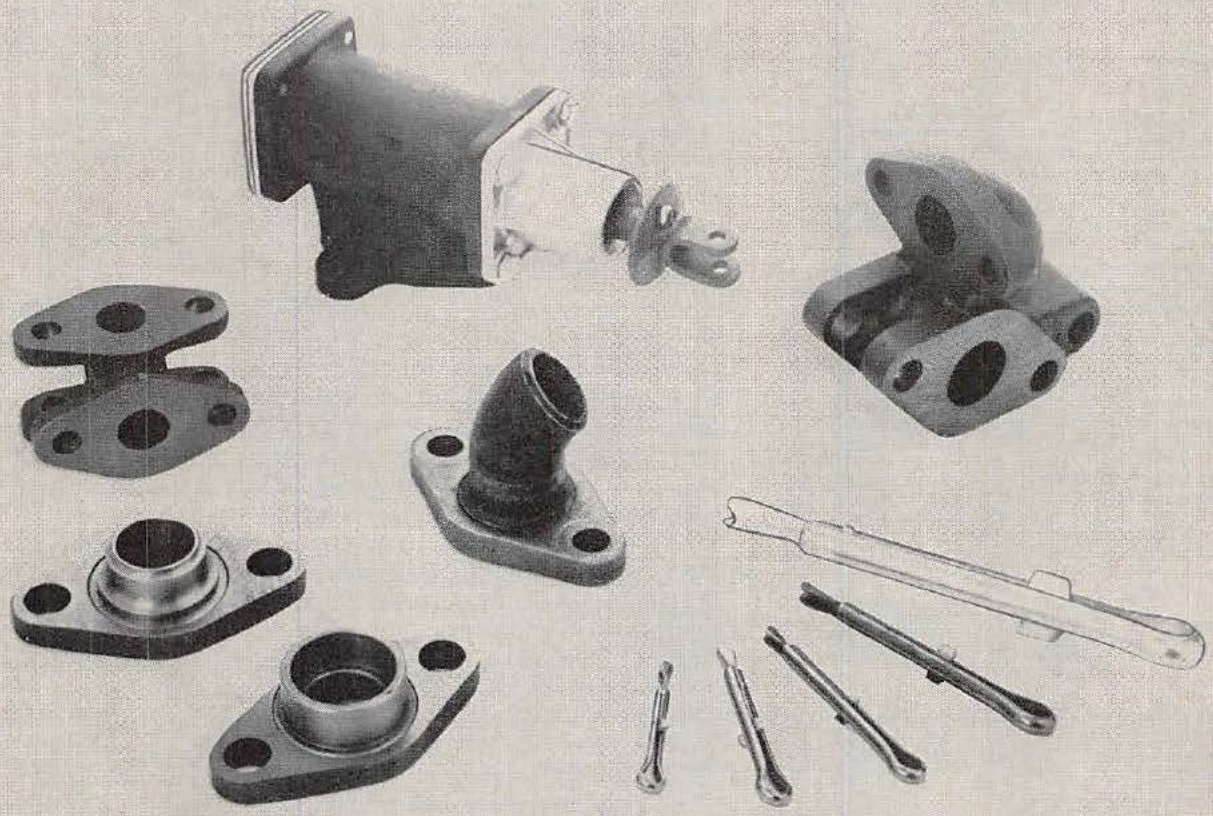

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# RAILWAY AGE

December 13, 1971

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# Short and Significant

### CAR ORDERS UP 31% IN 1971

Despite the legislative and financial uncertainties confronting railroads, freight-car orders continue to run substantially ahead of the 1970 pace according to the latest figures from the AAR and American Railway Car Institute. For ten months of 1971, railroads and private car lines ordered 44,-821 cars, compared with 33,464 for the comparable 1970 period. Of the cars ordered from January through October 1971, commercial shops are scheduled to build more than 88%. The backlog of new cars ordered but undelivered on Nov. 1, 1971, was 25,863, up 29% from the year-earlier figure.

### AUTOMOTIVE MANAGERS PLAN SESSIONS

The problems of fleet management will get a thorough going-over in Atlanta Jan. 19-20, 1972, when the Southern Railway hosts a national meeting of the Railroad Automotive Managers Association. Driver safety will be the general theme of the sessions. Among those who will address the meeting are specialists from such companies as Ford Motor, Sun Oil, and General Tire.

### SELEY AWARDS WILL GO TO VOLPE

DOT Secretary John A. Volpe, recipient of 21 honorary college and university degrees so far this year, is due for another honor. Volpe has been selected to receive the 1971 TAA-Seley Transportation Awards "for distinguished service to transportation." The awards, consisting of a personalized gold medallion and a $5,000 check which will go to a university of the winner's choice, will be presented by the Transportation Association of America during its annual National Transportation Institute to be held in Washington Feb. 1-2.

### BN EXECUTIVE WILL HEAD ALASKA RR

Walker S. Johnston, assistant vice president-operations of the Burlington Northern, will replace John E. Manley as general manager of the Alaska Railroad effective Jan. 1. Manley is retiring after nearly 35 years with the Alaska Railroad, where he started as a machinist in 1937. Johnston began his railroad career in 1936 with the former Chicago, Burlington & Quincy, now part of BN.

### DOT MAPS GRADE-CROSSING PROPOSALS

DOT will send to Congress next July recommendations for industry and government action to protect the nation's 232,000 rail-highway grade crossings, where accidents now cause about 1,500 deaths and 7,000 injuries a year. Only about 47,000 crossings at present have protective warning devices. DOT added it was researching low-cost warning signals. The statistics and forthcoming recommendations are part of reports required under the Federal Railroad Safety Act of 1970.

### 18% RISE IN CAPITAL SPENDING FORECAST

Capital spending by rails in first-half 1972 will rise by 18% over last-half 1971 levels, predicts a November survey of the U. S. Department of Commerce and the Securities and Exchange Commission. The forecast projects a $2.12-billion annual level of spending by rails for new plant and equipment in first-quarter 1972, up from a predicted fourth-quarter 1971 level of $1.64 billion.

### MACHINE-TOOL ORDERS DECLINE

Net new orders for the machine tool industry totaled $66.6 million in October, compared with $75.2 million in the preceding month and $75 million in October 1970, according to the National Machine Tool Builders' Association. Through the first 10 months of 1971, total industry orders amounted to $692.1 million, over $100 million less than in the comparable 1970 period. This year domestic business is off 9% and foreign business is off 34%.

### BANKRUPTCY JUDGE QUESTIONS PC/MTA DEAL

Penn Central's bankruptcy referee has rejected a trustee plan to let New York's Metropolitan Transportation Authority take over the road's Harlem & Hudson commuter lines north of New York City. Under the plan, MTA would lease the H&H right-of-way for 60 years at $1 a year, with PC continuing to operate the commuter service for an annual fee of $125,000 plus operating costs. The service is now losing PC $8 million a year. Federal Judge John P. Fullam objected to these terms, noting they provided PC with no reimbursement for debt service, no return on investment, no depreciation of track, and no possibility of profit.

### USSR WILL STAGE CONTAINER EXPO

The Soviet Union is inviting American manufacturers to participate in "Container '72," an indoor/outdoor exhibit of land, air and marine containers to be held in Leningrad Aug. 29-Sept. 15, 1972. Information is available from International Media and Exhibits, Inc., 231 Johnson Ave., Newark, N.J. 07108.

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The Norfolk & Western Railway has announced the implementation of an ACI Systems Corp. data collection system in the N & W terminal at Roanoke, Virginia. The installation is operational and consists of 8 ACI Systems Corp. Rail Scanners encompassing the Roanoke terminal to record all entering and departing trains. Specifically, 4 Rail Scanners multiplexed to 1 ACI Systems Corp. Label Decoding Processor are positioned at the east end of the yard. In similar fashion, 3 Rail Scanners are positioned at the west end, and 1 Rail Scanner is in an auxiliary yard.

C. Van Holton, general manager-operations planning for the N & W, said the system is expected to pave the way for improved service to shippers by making it possible to maintain real time records of cars through Roanoke Terminal. Holton added that other anticipated benefits of the ACI installation include improved utilization of equipment, improvement in yard control and inventory procedure, reduction in yard time, and facilitating car accounting.

The 8 ACI Systems Corp. Rail Scanners input data to the Norfolk & Western Central IBM 360-65 computer for processing and producing essential information to concerned terminal operating personnel.

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# RAILWAY AGE NEWS

## AAR beefs up Research and Test budget, will

Directors of the Association of American Railroads have approved a 1972 budget of $1.3 million for the AAR's Research and Test Department—an increase of 70%. This was disclosed by the association's president, Stephen Ailes, in a Dec. 1 address before the Rail Transportation Division of the American Society of Mechanical Engineers in Washington.

Said Ailes: "This mark of support at a time when industry revenues are low demonstrates the industry's growing recognition of new technology and new concepts. Furthermore, it enables AAR to continue on a broadened basis cooperative programs with suppliers and with government."

Ailes described the railroads' stepped-up research activities in a speech designed to put to rest, he said, the idea that railroads are not willing and able to cope with their problems. He renewed his plea for enactment of the Surface Transportation Act of 1971 (the Hartke-Adams bill). Passage of this legislation, he suggested, will help railroads to help themselves. He reiterated the industry's opposition to the so-called Fastcor bill, which he said would create a corporation controlled by non-railroaders. It was in support of his contention that railroad affairs are best managed by railroad men that Ailes described in some detail the industry's research program.

The objectives of the AAR's Research and Test Department, said Ailes, are (1) safety, (2) environmental concerns and (3) "an increase in the effectiveness and efficiency of the rail mode of transportation."

He elaborated on each of these:

"In the field of railroad safety, the largest and most dramatic program is being conducted cooperatively with the Railway Progress Institute and its Tank Car Committee. The Tank Car Safety Project demonstrates several principles of operation. In terms of support for the program, the AAR is contributing about $175,000 and four man-years over a two-year span. The tank car companies are contributing about $580,000 and ten man-years of effort during that same period. FRA is conducting parallel and coordinated work at a rate of over $300,000. The cooperation between suppliers, government and railroads through this program is critical . . .

"The Research and Test Department is examining a wide variety of components that are critical to safety including wheels and many elements of the freight-car trucks and couplers . . . The coupler manufacturers, working through the Railway Progress Institute, have agreed to a cooperative program with the AAR to identify the service environment within which couplers must survive. This program will serve as a basis for improved performance specifications and improved designs of couplers."

As for track-train dynamics research, Ailes said: "There have been instances in which derailment has occurred because of the dynamic instability of a car or a train on a certain section of track. Various causes have been assigned to these unexplained derailments. We now know that a combination of factors generally enter in, including the dynamic characteristics of the track, the dynamic characteristics of the train, and the operating practices. AAR has contracted with the Southern Pacific Transportation Company for the development of a description of a national research program on track-train dynamics. Railroads, suppliers and government are cooperating in the development of phases of that research program and are expected to participate in the eventual conduct of research which will lead to a better understanding of track-train dynamics . . .

> Railroading is the high-technology, low-pollution, very efficient mode.

"As to environment, AAR has a number of programs in progress. Our most important program relates to locomotive emissions. The Mechanical Division General Committee has accepted a recommendation from the Research and Test Department for (1) smoke metering devices, (2) procedures for certifying locomotives, and (3) the

## broaden cooperation

development of an industry set of standards and objectives with regard to emissions . . . A substantial amount of cooperative research with railroads and suppliers will be necessary to achieve the objectives of the program.

"In the area of improving transportation effectiveness, perhaps no other aspect of the railroads is more important than the design and operation of yards and terminals . . . The Research and Test Department has a contract with C&O/B&O for the development of a research program on yards and terminals . . . The development of this research program is being done cooperatively with railroads, suppliers and government."

Ailes also described steps being taken toward development of a national freight-car information system. "I repeatedly run into the assertion that the industry does not want to do anything about this problem," he said. "This industry has spent one-half billion dollars on computerization and on the communication system that makes computerization possible. These systems and the information gathering network that supports them form the only possible basis for a national information system. The industry has spent $20 million labeling cars so that the ACI system can be tried out. Several million dollars have been invested in scanners. Four and a half years ago the industry decided that a central computer should be established and through AAR it has spent $3,250,000 on the TRAIN system. A comparable amount has been spent railroad by railroad in the development of systems to communicate with the TRAIN operation." In addition, said Ailes, the industry has committed resources valued at $1 million toward a task-force study to determine "exactly what must be done to provide a national information system which will enable the industry not only to know where all freight cars are at all times, but also where the service is breaking down."

Ailes concluded: "The railroad industry is a high-technology industry. It is a low-pollution industry. It is a very efficient transportation mode. By making progress toward the objectives that I have described, AAR research is making a contribution toward safer and more effective railroad operations."

## House revolts, frees D.C. funds

It was almost unbelievable, even to the most dedicated supporter of rapid-transit in the nation's capital.

The U. S. House of Representatives on Dec. 2 in a very rare revolt stunned Speaker Carl Albert, Republican Minority Leader Gerald Ford and the bipartisan leadership of the powerful House Appropriations Committee by voting to release funds to continue construction of Washington's Metro subway system.

After seven hours of impassioned debate, the House voted 196 to 183 to appropriate the $72-million District of Columbia contribution to Metro. Senate approval is certain.

It was a victory for President Nixon, who had pled for release of the funds, and mostly junior House members, led by Rep. Robert N. Giaimo (D.-Conn.) and Rep. Silvio O. Conte (R.-Mass.).

The pro-subway support came from all parts of the country, but was lowest in the South. The strongest bloc naturally was from metropolitan areas.

It is almost unprecedented for the House to overturn its Appropriations Committee.

"We are engaged in a battle which I interpret to be a battle of principle," Chairman George H. Mahon (D.-Texas) of the Appropriations Committee declared before the vote, his voice quivering with emotion. The 36-year House veteran, one of the most powerful men in Washington, added, "Please don't kick in the teeth of the Appropriations Committee."

Rapid transit advocates were joined by opponents of the seniority system and Republican loyalists to President Nixon to force the issue.

The Washington Metropolitan Area Transit Authority promptly announced July 4, 1974 as the opening date.

WMATA had run out of funds Aug. 1. Suburban Maryland and Virginia jurisdictions were indicating they would no longer meet their shares of the system's costs unless the District of Columbia government met its own.

The House action in freeing the $72 million D. C. share means—with the addition of two-to-one Federal matching funds and similar suburban payments—that $300 million in new contracts can be allocated in the next few weeks.

Among these contracts is one for the first 300 Metro cars which are expected to cost about $110 million. With the new funding, WAMATA capital spending is now to rise to $887 million. Funds for the District's share of the transit project had been held up since 1968 because of a local freeway dispute.

## Pittsburgh: Referendum for Skybus?

Pittsburgh, where the medium-density, rubber-tire transit concept known as Skybus originated, failed to give all-out endorsement for such a system to solve its own people-moving problems last month. Political pros are still arguing as to the exact significance of the November election results. But, in the wake of balloting, it seemed inevitable that acrimony, and not action, would characterize transit progress in Pennsylvania's Allegheny County for some time to come.

Voters returned the three incumbent county commissioners to office but gave the most votes to the minority, anti-Skybus member of this executive triumvirate. All this left the $60-million UMTA grant which was recently made for Skybus and exclusive bus roadways up in the air. Skybus has been developed by Westinghouse Electric and then refined in the course of a Federally-aided non-revenue demonstration project operated by the Port Authority of Allegheny County. It utilizes concrete guideways, normally elevated. Westinghouse Air Brake has spearheaded an opposition plugging for a conventional steel-wheel/steel-rail system. Until now there has been no actual referendum on Skybus transit itself, but only votes for its backers or opponents. Pennsylvania Senator Richard S. Sweiker (R.) is proposing such a referendum in conjunction with next April's Allegheny County primary election. Sweiker says he feels UMTA's $60-million grant could be held in escrow pending a conclusive decision by Pittsburgh area voters.

# Coding standards: Potential for $1.2-billion saving?

Shippers and carriers could save $1.2 billion annually by using standardized codes covering movement of goods across the U.S., and even on an international basis. The estimate, made by the Office of Facilitation, DOT, is based on elimination of waste and duplication of effort that result from lack of codes.

DOT has awarded a contract to the Transportation Data Coordinating Committee to develop jointly with the Office of Facilitation a uniform intermodal commodity description and code system for use in domestic and international commerce. "We have assumed the lead agency role in this effort at the request of the Office of Management and Budget," said DOT Secretary John A. Volpe. "It is our responsibility to determine, develop and implement the freight data coding standards needed by the Federal government in its activities of promoting, regulating and using freight transportation."

Railroads are already active in this area, both through individual efforts and through the Committee on Standards and Coding of the AAR's Data Systems Division. Two major efforts have been the development of the six-digit Standard Point Location Code and the seven-digit Standard Transportation Commodity Code. With three more digits, SPLC could be used for worldwide shipments. The Transportation Data Coordinating Committee has endorsed these two codes.

The need for coding standards for all transportation was emphasized by E. A. Guilbert, president, TDCC, at the Data Systems Division's annual meeting. Cargo moves today at the speed of administering the paper work, he said, and it can be moved faster if the paperwork can be computerized, which standard codes can make practical.

It now takes 17 commodity classifications to ship pencils from Peoria, Ill., to Paris, France. However, with standard codes, any commodity could be moved across the U.S. using 77 characters, and only 240 characters would be required for an international movement of any kind of cargo, Guilbert said.

# Amtrak sets deadline for subsidy payments

Unless the five states served by Amtrak's daily "Lake Shore" come through with promised payments to offset part of its deficit by Jan. 5, 1972, service over the former New York Central from Buffalo through Cleveland and Toledo to Chicago will cease. In letters to the governors of New York, Pennsylvania, Ohio, Indiana and Illinois, Amtrak President Roger Lewis reminded them that it was their agreement to offset two-thirds of the train's losses that had resulted in continued operation. None has yet provided any funds.

Lewis noted that losses on the daily train in each direction have been running at an annual rate of $3 million. He called patronage "disappointing," averaging fewer than 45 passengers a day. Service over Penn Central's route which was once traversed by the "Twentieth Century Limited" was not included in the basic network of the National Railroad Passenger Corp. last May. It was state pledges to support the service that led Amtrak to continue it.

# Canada rejects Amtrak concept

The Canadian Transport Commission has rejected proposals that "a single national passenger-train operating corporation be set up similar to the Amtrak development in the United States." But in determining that "CNR and CP Rail should continue to operate under separate identity and responsibility," the Commission has proposed that the two systems share their facilities where possible.

This determination came in an interim report on a study, instituted last April 14, designed to develop a "rationalization plan" for the Montreal/Toronto-Vancouver services operated by CNR and CP Rail.

The report emphasized that "the Commission has made a firm decision that passenger train service on the Montreal/Toronto-Vancouver route will be continued in the public interest for as long as there is a substantial level of traffic."

But it conceded that these services are becoming increasingly costly to taxpayers. CP Rail's "Canadian" lost $15,171,024 in 1968, and CNR's "Super Continental" lost $14,058,030 in 1969. Under Canadian law, these services have become eligible for subsidies of up to 90% of losses.

To cut these losses, The Commission proposed that the two carriers integrate ticket and reservation offices; adopt a common fare structure with interchangeable tickets; share terminals and related facilities at Montreal, Winnipeg and Vancouver, and possibly other points; and establish equipment pools at various points to permit the exchange or sharing of equipment.

# Railroads filing for surcharges

Railroads are going after additional freight revenues—but in the form of an "emergency surcharge," not a general rate increase. Eastern, western and southern traffic officers agreed on the 2½% surcharge proposal Dec. 1 in Chicago, and indicated that their petition would be filed with the ICC "as soon as practicable."

The added charge, it is understood, would be applied to existing rates; no tariff supplementing would be required. And the figure agreed upon, 2½%, would appear to fall well within the bounds of what the Price Commission would approve. Under Commission regulations, agencies such as the ICC may approve rate increases but must notify the Commission of their orders.

The railroads' traffic officers said the surcharge would be applied on all freight charges. Lumber and lumber products, however, are to be subject to a maximum increase of two cents per hundredweight, with certain loading restrictions. And, the traffic men said, individual exceptions to their action may be announced later.

Meanwhile Wisconsin railroads are preparing for hearings Jan. 11, 1972, on their proposal to levy a surcharge of $10.30 per car on all shipments originating or terminating in the state. Western Railroad Traffic Association studies show that roads expend $12,741,059 annually in complying with "the unnecessary and excessive costs incurred in order to comply with the 1907 Wisconsin train crew law." One house of the state legislature has already given its OK to repeal of the crew law.

# General Electric announces
## an automated engine rebuild plant to give you off-the-shelf availability of remanufactured engines

It's the third step in General Electric's ACTION 71 . . . a $10 million parts-supply improvement program to help you get the parts you need and to help cut your maintenance costs.

This step in our ACTION 71 program is a brand-new engine remanufacturing plant in Grove City, Pennsylvania. An entire plant devoted to diesel engine and component rebuild. Eighty-three rebuild specialists. New automated equipment. A comprehensive 25-hour testing program . . . including engine break-in, fuel injection system tuning, 4-hour full power test run, plus thorough crankcase inspections during and after testing.

**Our Grove City plant will help us help you cut maintenance costs.**

How? By making remanufactured engines and components available when you need them. When you order unit exchange, you receive off-the-shelf delivery to get you back in service . . . fast! And, you get a new engine warranty.

Or you may elect to have us rebuild and return your own engine. We'll handle the job from scrub-down, through bearing replacement to comprehensive test and have it completed within six weeks.

**Save even more with a running-engine rebuild program.**

To help you reduce maintenance costs even further, we can work with you to set up a special running-engine rebuild program. We'll perform only those repairs you specify and deliver on a prearranged schedule.

At Grove City, we have the men . . . the equipment . . . the facility to serve your engine rebuild needs.

For full details, contact your GE Transportation Renewal Parts Sales Engineer, or write for our publication, *General Electric Diesel Engine Remanufacturing*, c/o General Electric Company, Transportation Renewal Parts Operation, Section 121-52, 2901 E. Lake Road, Erie, Pa., 16501.

**ACTION 71 . . . to cut your maintenance costs.**

GENERAL ELECTRIC COMPANY
TRANSPORTATION SYSTEMS DIVISION
ERIE, PENNSYLVANIA 16501 121-52

GENERAL ELECTRIC

# Lines on Labor

GUS WELTY

### A NEW LOOK, "NOTWITHSTANDING"

A somewhat fore-shortened U.S. Supreme Court—with just seven members sitting—has once again cast an eye at railroad management/labor relations, with results that are yet to be measured. By a 4-3 vote, the court upheld lower-court findings dealing with the ICC's obligation as regards enforcement of employee-protection conditions in rail mergers. And, while the decision concerned a specific and rather unusual case and represented a technical interpretation, it may well have its effect—on the Commission, on merging railroads and on the labor organizations.

### THE COURT SPEAKS—AND CONFUSION MAY BE THE RESULT

The Interstate Commerce Act does say that in approving a merger/consolidation case, the ICC has to require that there be a "fair and equitable arrangement" covering employee protection for a four-year period. But the Act also says that "notwithstanding any other provisions of this Act," agreements regarding employee protection "may hereafter" be made by the railroads and unions. As the ICC saw things, the "notwithstanding" clause relieved it of any obligation to review the adequacy of conditions later agreed upon in a management/labor agreement. The court found otherwise, saying that when a pre-merger agreement is approved in an ICC decision in such cases, then that agreement "becomes a 'condition' of the Commission's 'approval,'" and therefore the subject of judicial review. And if this seems confusing, think how it must seem to the (1) Commission, (2) railroad, and (3) union negotiators and lawyers.

### IF MANAGEMENT AND UNIONS AGREE, WHAT ELSE IS NEEDED?

Some observers think the high court might have ruled differently a month or two from now—with a full complement of justices and, possibly, with a more conservative orientation toward interpretation. This may be true. In the 4-3 decision, Justices Burger, Blackmun and White dissented, with Justice Blackmun (writer of the dissent) saying that the opinion "amounts only to a sympathetically imposed judicial cure that is not authorized by the Interstate Commerce Act, that is violative of Congress' intent, and that ignores unusually clear legislative history."

Rail merger/consolidation cases have involved a wide variety of employee-protection agreements—many negotiated between the railroads and the unions involved, and some imposed by the Commission.

Discussion of merger-related protective agreements can wind up in almost endless argument, when you get into comparisons and contrasts, pros and cons of Road A+B vs Road Y+Z. But there is an impression left, that with (as always) certain exceptions, protective agreements negotiated by the parties have been no less and probably more acceptable to rail labor generally than those imposed by the ICC. In some instances, in fact, you sort of scratch your head and wonder what better could be done than what railroads and unions have agreed to. In any event, where there has been agreement, unions have been a party. So you wonder: What is the court saying? And why?

# Penn Central sags with the economy

A still-sluggish general economy, aggravated by coal and dock strikes, plunged Penn Central deeper in the red in October. The bankrupt carrier's October loss of $25,377,398 brought the year's deficit so far to $220,915,005. In 1970, Penn Central had an October loss of $19,184,562 and a 10-month deficit of $252,875,627. These figures are on a fully accrued basis with provision for certain rents, taxes and interest payments now deferred by order of the reorganization court.

Penn Central's carloadings in October of this year were down 23.2% and net ton miles were off 19.1% from October 1970. Trustees estimated that the strikes reduced freight revenues by $18 million, more than offsetting gains from 1971 rate increases.

The impact of strikes caused the road's operating ratio to rise to 90.77% in October. But the operating ratio for 1971's first 10 months was 88.06%, compared with 91.76% for the comparable 1970 period.

Penn Central received payments totaling $3.5 million from Amtrak in October for what it described as "partial reimbursement" of losses incurred from operating intercity passenger trains. Amtrak payments for this year's first 10 months totaled $19.6 million.

# BN, Soo propose wheat rate cuts

Burlington Northern and Soo Line are trying to put together a lower-cost/better-service package covering movement of wheat and wheat flour from Minnesota, Montana, South Dakota and North Dakota points to Minneapolis-St. Paul and Duluth-Superior. Proposed rate cuts average 25% and, the roads say, should save growers millions of dollars annually. At the same time, service provisions—covering faster loading and unloading and direct billing to elevators and mills—should increase car supply, improve service.

Under the proposal, interior transit operators—millers and elevators—would be allowed one stop for storage or milling. The BN/Soo timetable calls for the new rates to go into effect by Dec. 15. BN and Soo have made one modification in their original proposal—to allow extra time for shippers to specify an unloading elevator, at a charge of $50 for box cars and $80 for covered hopper cars for a day's delay.

# LUBRICATION ENGINEERING NEWS

**Cities Service research and development program constantly producing new, improved diesel engine lubes**

Cities Service Oil Company maintains an aggressive and continuing research and development program at the Cities Service Research Center complex near Princeton, New Jersey. Improved products for railroad applications, both on track and off, are under constant development and testing. Within the past two years alone, superior lubricants have been introduced for a number of different applications. In many cases, these advanced railroad lubes

have taken the place of two or more previous products and thus served to shorten the list of "required" lubricants in customers' inventories. For information on specific products now under development and available for test application programs, drop a line to L. M. Fleming, Transportation, Sales Department, Cities Service Oil Company, Box 300, Tulsa, Oklahoma 74102.

## New CITGO RD-836 diesel engine oil extends service life of high horsepower locomotives

The promise of pulling more tonnage with fewer units and a resultant decrease in maintenance costs has remained little more than a promise in many cases. Higher horsepower diesel engines place greater demands on the crankcase oil and on those moving parts whose life depends on effective lubrication. Conventional high dispersant diesel lube oils just couldn't handle the load. Something better had to be developed.

That something better turned out to be CITGO RD-836, specifically formulated to get the maximum usage from each new high horsepower engine. RD-836 withstands more heat for longer periods; neutralizes greater amounts of acid; keeps oil filters and engine surfaces cleaner. Wear is reduced and oil life is significantly extended, resulting in less downtime and lower maintenance costs. Thirteen major railroads are now using CITGO RD-836. In case after case, examination of pistons, rings and cylinders following thousands of hours of operation shows virtually no wear.

**Oustanding reserve alkalinity and stability**

Among the properties which enhance the performance capabilities of CITGO RD-836 diesel engine oil include excellent reserve alkalinity for extended TBN retention, very fine compatibility with other approved diesel engine oils and unusual stability. **Field tests have indicated this outstanding stability results in a drastic reduction of clutch slippage.**

CITGO RAILROAD LUBRICANTS EXCEED THE NEED.

CITGO

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In addition to these qualities, RD-836 also possesses exceptional anti-rust and anti-foam properties provided by special components in the additive package. The superior grade medium VI base stocks contribute exceptional oxidation stability and anti-wear protection along with good silver lubricity.

**Dispersant, detergent keep engine parts clean, filters free-flowing.**

An ashless dispersant and a detergent additive are key ingredients in CITGO RD-836 diesel engine oil. Designed to provide both longer service intervals and extended filter life, its high despersancy permits the oil to flow readily through filter elements with a minimum of filter and oil

cooler plugging. This is particularly important in the lubrication of engines equipped with by-pass valves, where particles in the unfiltered oil could otherwise settle out and cause abrasive damage to bearings. **All these superior characteristics have helped CITGO RD-836 become one of the few lubricants to win a place on General Electric's "Superior Class II" rating list.**

**CITIES SERVICE OIL COMPANY**

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loses his temper; the chief electrical engineer starts climbing the walls; and the commissioner calls in the general counsel for a conference telephone call to the mayor.

Plenty has been said already about the manufacturers' and operators' part in this problem (RA, Aug. 9, p. 24). But no one has focussed yet on the part played by Krutchnikoff's counterparts across the land—the consultants.

That is surprising, in view of the following:

—One well-known consultant was indicted for attempted graft (the DA's office dropped the charges because they couldn't prove that Caribbean cruise

—One well-known consultant did feasibility studies for a western Canadian city and shortly afterward for a slightly larger, Florida city. The first study proposed an all-rail system, the second a skybus-type system. The consultant admitted in private that his figures could be used either way in either place—"so we gave each client what he asked for."

That's only a sample; specifics follow, as does the case *for* consultants. But it's worth mentioning that *Business Week* magazine just ran a cover story on the obvious potential for conflicts of interest arising from the fact that (a)

civil engineering (construction), or [illegible] civil engineering consultants. But a check of the main transit operating chiefs shows one after the other reporting bugs, often serious ones, in new car fleets: motors, braking, signaling, train controls, in short, anything that has to do with cars and car interfaces. So that narrows the problem down right away to one or at best two consulting areas.

There are plenty of strong opinions on this, pro and con. The chief critics of the consultants, although not the only ones, are the manufacturers.

Here's what E. T. Ahnquist, president of Pullman-Standard, has to say: "The

and it's true in the sense of faster acceleration and deceleration, but not in reliability."

Less doctrinaire, but saying something similar is Jack Brannan, former chief mechanical officer of the Long Island, and now doing private car consulting work himself. Says Brannan:

into such a blanket condemnation that the consultants' own case gets overlooked.

There is a case for the consultants, and it rests on three main points:

—Operating bugs turn up in new car fleets where *no* consultants had anything to do with either cars or car interfaces.

workmanship defects and some poor design. I'm inclined to be more critical of some of our manufacturers for not using the latest technology. From what I see, I can't be too critical of the consultants for reflecting the wants of prospective buyers of equipment."

The New York City Transit Authority has its own 1,000-man engineering

*MOVING PEOPLE*

# Revamped from the trucks up, Auto-Train

By ROBERT D. BARTLEY, Associate Editor

Would you believe . . . purple trucks? Or Beef Wellington, on the house? Or, to quiet the kids, free hot dogs, or if that won't work, a pinball machine? Would you believe a car with bright yellow walls, a purple ceiling, cranberry carpeting, and the purplest purple seats you have ever seen in all your life? Finally, would you believe these—plus a lot more surprises—are all yours when you buy a rail travel ticket?

This is Auto-Train, the bold—almost brazen—concept that has come along to allow, for example, Dad to take Mom, plus a couple of the kids, plus the Ford, plus maybe Fido, too, from near Washington, D.C., to the central part of Florida, all the way by rail at a base cost of $190. The 870-mile, overnight trip calls for departure at eight p.m. and arrival at 11 a.m.

Auto-Train scheduled its inaugural run south for Dec. 6. Bookings on subsequent trains (they depart south-bound and northbound daily) have been running at a brisk pace, according to an Auto-Train spokesman. The enthusiasm of Auto-Train personnel is contagious One industry leader commented that he felt Auto-Train has all the essential ingredients for really boosting public confidence in rail passenger travel.

● **Equipment: It, too, is bold.** No less bold than the concept itself is the equipment operating on the Washington-Florida runs. Starting at the front, each train is powered by a pair of new General Electric U36B locomotives (altogether, five such units were purchased).

The first train consisted of 13 cars. More cars are expected to be added as they become available.

Cars making up the first train were: a dormitory-dome, lounge-dome, night club, buffet-entertainment, kitchen-dormitory, steam-generator, plus four sleepers and five auto carriers. Eventually, as many as 12 auto carriers may be required. Other types of cars are to be added, too—like "adults only" domes and special entertainment cars for

Pacific and Seaboard Coast Line have all sold cars to Auto-Train. Although they were purchased after Amtrak had selected its 1,200 cars from the national fleet, the Auto-Train cars "were generally in excellent shape when they came to us," advises Robert Johnson, manager of Pullman-Standard's rail passenger and rapid-transit carbuilding plant in Chicago.

● **P-S puts the fleet in shape.** Thus far, all cars in the Auto-Train fleet, including the auto carriers, either have been or are being rounded into shape and brought up to Auto-Train's standard at the P-S plant. What P-S is doing to the cars is unlike anything one would expect to see in a rail car plant. It is true—the cars do have trucks which are painted deep purple. The rest of the car exteriors, including the stainless steel ones, are painted white with red and purple stripes. The roofs are silver. The ends of the auto carriers are painted purple. Asked A. Q. Olson, Auto-Train's chief mechanical officer, "Do you get the impression that we don't want anyone to mistake our cars for someone else's?"

P-S's Bob Johnson, who readily admits that, at first, the color scheme did not seem appealing to him, feels the cars "may have more razzle-dazzle" than any built new at the P-S plant in recent years.

The bright colors were selected to make Auto-Train "more exciting than anything people traveling by rail had seen before," says Mrs. Carolyn Settles, design consultant, who serves as color coordinator for Auto-Train. "A lot of people think Braniff is an exciting airline because it's colorful. We want the same thing to happen to Auto-Train."

● **Consistency in color.** Auto-Train remains consistent throughout with its color selections. Almost everything relates to the exterior color scheme in some way. The tickets and the hostesses are color-coordinated, too. The latter have a variety of costumes to wear to suit the job they are doing, and, of course, purple is the dominant color.

car, for instance. Upstairs in this former Santa Fe full dome car, P-S craftsmen installed deep blue carpeting on the walls as well as on the floors. Cocktail tables and new seating have been in-

# Are we designing cars for riders –or for designers?

By JOE ASHER

The scene: The Klump City Transportation Authority is taking delivery of the first cars in its shiny new car fleet. Everybody turns out for the ceremony. Flashbulbs start popping as Governor Sludge arrives with a state trooper escort. The governor calls the rapid transit cars The Dawn of a Bright New Era. Miniskirted hostesses, their lips blue with cold (it's 10 below zero and snowing), hand out press kits from the Pomp & Circumstance Carbuilding Co., hailing the cars as a New Horizon in Mass Transportation.

Mayor Froodle, at the opposite end of the platform from Governor Sludge (they don't speak), tells reporters the cars are The Beginning of a Bright New Age. (So it is. The fare is going up next month.) Wiring & Winding, the electrical company that stands to make the only real money on the cars, hands out its own press kits, applauding the cars as An Exciting New Breakthrough.

KCTA's Commissioner, Ezra Plunk, does an Alphonse-Gaston act with Ichabod Krutchnikoff, the renowned consultant who drew up the car specifications. Photographers pose them with arms round each other's shoulders. Plunk speaks in religious tones of Krutchnikoff's "'vision;" Krutchnikoff insists it's nothing compared to Plunk's "integrity."

The climax of the ceremony is the breathless last-minute arrival of F. Thornton Garrulous, UMTA's Deputy Assistant Administrator for On-Going Review Projections. He's carrying a big black suitcase, and everyone jokes that it contains the Fed cash that made all the rest possible. But the oohs and ahs from the crowd turn to cries of delight when he opens it and it turns out to be filled with lockets containing portraits of the DOT Secretary. The girls in mini-skirts help Thorny distribute the lockets, and all join in a chorus of "I've been working on the Klump City Transportation Authority." It isn't every day that a Bright New Era comes dawning.

The scene is exaggerated, of course. But not too distant from common, observable fact. And common, too, is the not-so-publicized scene the week *after* delivery, when the cars have to be shopped, because of operating bugs. That's when the shop superintendent loses his temper; the chief electrical engineer starts climbing the walls; and the commissioner calls in the general counsel for a conference telephone call to the mayor.

Plenty has been said already about the manufacturers' and operators' part in this problem (RA, Aug. 9, p. 24). But no one has focussed yet on the part played by Krutchnikoff's counterparts across the land—the consultants.

That is surprising, in view of the following:

—One well-known consultant was indicted for attempted graft (the DA's office dropped the charges because they couldn't prove that Caribbean cruise tickets for a prospective client and his wife were more than a "goodwill" gesture).

—One well-known consultant has the curious distinction of having designed more car fleets than anybody else in recent times. And not one fleet came on stream without serious bugs.

—One well-known consultant did feasibility studies for a western Canadian city and shortly afterward for a slightly larger, Florida city. The first study proposed an all-rail system, the second a skybus-type system. The consultant admitted in private that his figures could be used either way in either place—"so we gave each client what he asked for."

That's only a sample; specifics follow, as does the case *for* consultants. But it's worth mentioning that *Business Week* magazine just ran a cover story on the obvious potential for conflicts of interest arising from the fact that (a) many consulting firms have gone public and are under pressure to show constantly rising earnings per share; (b) many consultants have been bought out by conglomerates or big banks.

One thing has to be said right away. Operators, by and large, are reporting no particular troubles with either their civil engineering (construction) or their civil engineering consultants. But a check of the main transit operating chiefs shows one after the other reporting bugs, often serious ones, in new car fleets: motors, braking, signaling, train controls, in short, anything that has to do with cars and car interfaces. So that narrows the problem down right away to one or at best two consulting areas.

There are plenty of strong opinions on this, pro and con. The chief critics of the consultants, although not the only ones, are the manufacturers.

Here's what E. T. Ahnquist, president of Pullman-Standard, has to say: "The

# THEY LOOK FINE, THEY WORK FINE, BUT OH, THE PAIN IT TAKES TO GET THEM THAT WAY

consultants may have started out with an approach to problem-solving, but too often the result is the opposite. They have a tendency to ignore what has been proven, and try to sophisticate things to the point where it's not economic any more.

"I wouldn't rule them out completely, but they tend to justify their existence by making changes—a lot of them needless changes. And when it's all over, they bow out and blame everybody else, if things go wrong."

P. G. Welsh, P-S marketing manager for transit systems and a long-time engineer, puts it even more strongly.

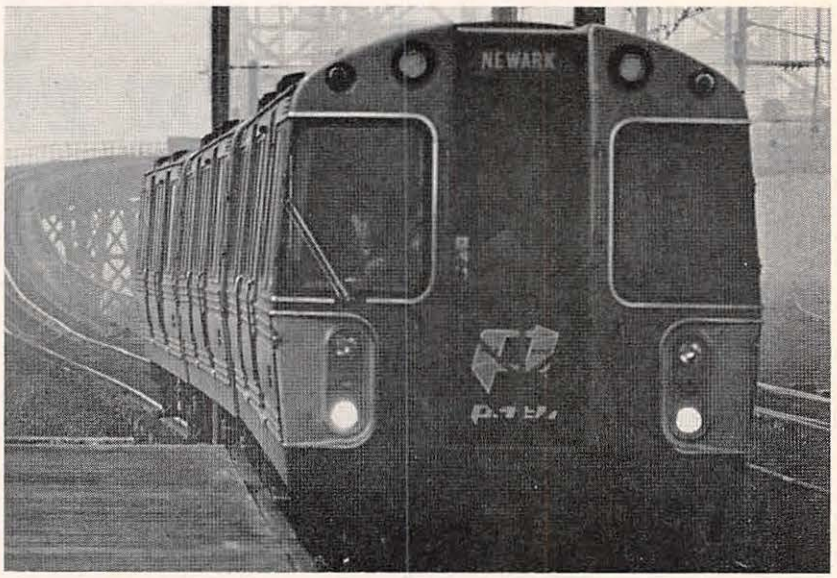
"There's been a general shift into this business by consulting firms which saw big opportunities in rapid transit. Only they're mostly civil engineering firms with little or no competence in rail car design or construction.

"Let me give you an example. Here we are doing a car job, and [Welsh mentions a famous consultant] is put in charge of the specifications. I say to him—'How do you specify ride quality for a car?' And he scratches his head and says, 'Well, that's a tough one,' fully hoping we'd do the specifying. A lot of them do things like that. So nowadays we don't allow them in the plant. Eventually, the consultants will be competent, but the learning curve is flat. In the meantime, it's a helluva period, and we're going to suffer."

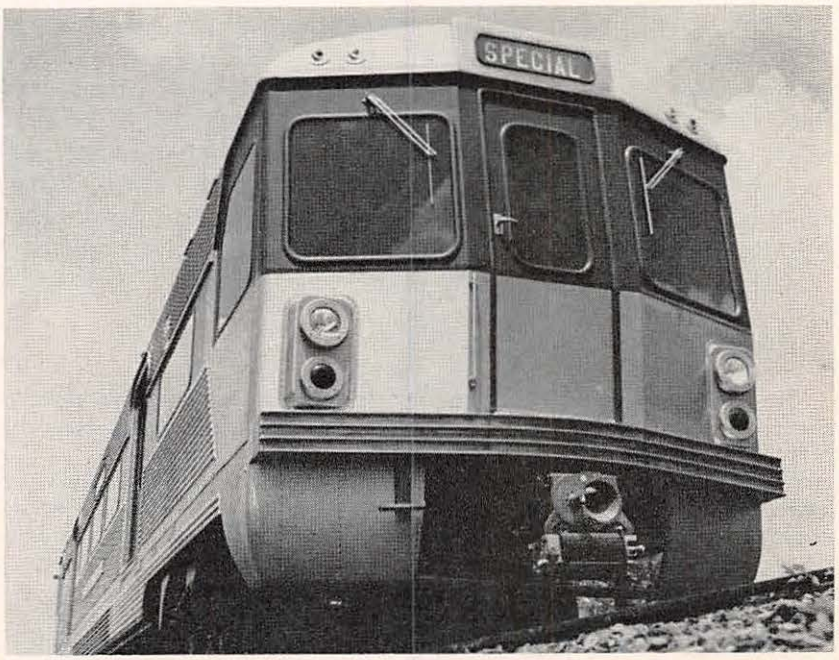
In addition, P-S officers like to emphasize that they can and have been able to deal directly with customers on new car designs, citing the example of the Chicago & North Western commuter cars of the mid-Sixties as proven, reliable, and popular with the riding public.

Rumblings similar to the ones at Pullman come from many other quarters in the manufacturing establishment: Hawker-Siddeley, General Steel Industries, WABCO, General Electric, and others. Most won't talk for publication. Some will, if their names aren't used, like this very important Hawker-Siddeley man:

"There was going to be a consultant on the [Montreal] Expo car job. But the work wasn't very good, and they were thrown off. The Toronto subway cars had no consultant, and the GO Transit cars had consulting only by the Canadian National Railways. The consultants are experienced in civil engineering, but when it comes to operating experience and vehicle equipment particularly, they lack personnel. That's why you're seeing so many crazy car prices and crazy bids these days, which get thrown out. The new transit agencies don't have in-house expertise, so they need to get it somewhere—and that should be from the existing operators."



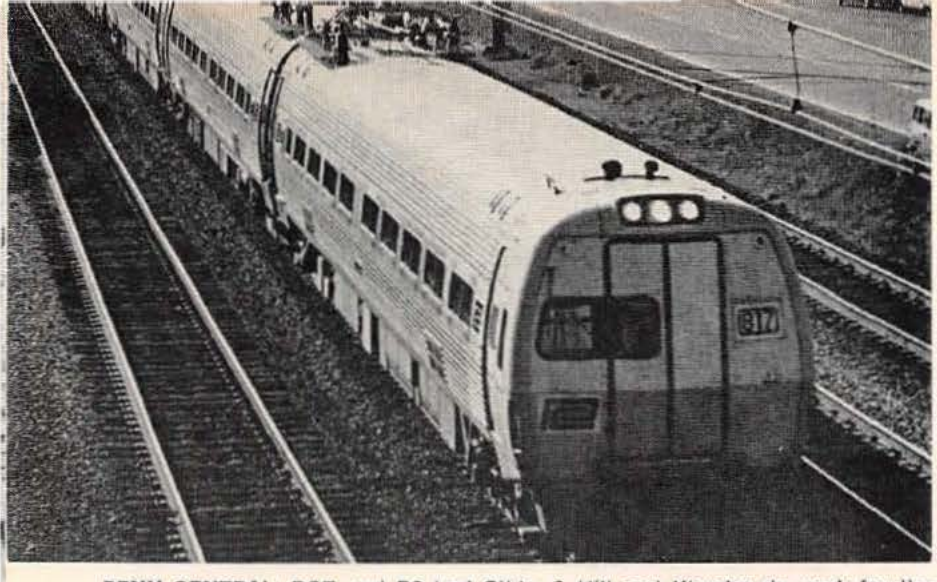

**PATH:** Consultants weren't needed to design the modern, air-conditioned PATH car fleet. PATH's own engineers collaborated on it with General Steel.



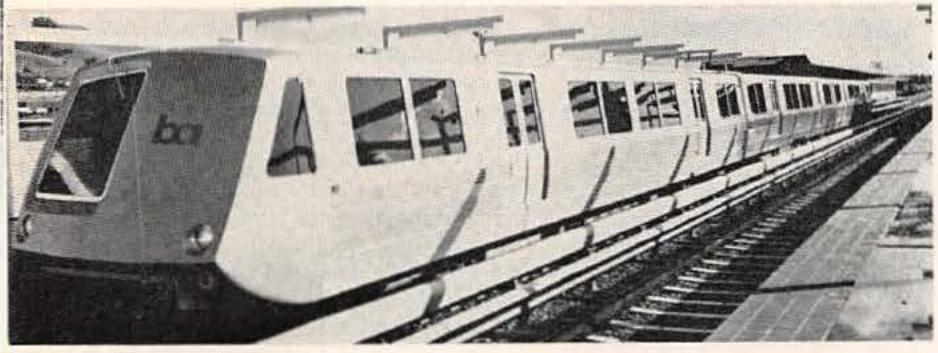

**PATCO:** Louis Klauder played a key role in designing this line from scratch, cars included. The cars are fast and automated, but not trouble-free at first.

And here's a very senior WABCO signal engineer:

"Sometimes they don't even know when they're violating basic laws of physics. On the Long Island job, the pulse code apparatuses were set up for 50 interruptions a minute. Now, there are 60 seconds in a minute, right? So the duration of the code pulse is just over one second, right? The consultant [a famous one] says to me: 'The equipment



**PENN CENTRAL:** DOT and PC had Gibbs & Hill and Klauder do work for the Metroliners: systems approach and all that. Still, there were bad bugs.



**BART:** Rohr was late delivering cars to BART and blamed sub-contractor Westinghouse Electric, which blamed FBTB specs.

**LONG ISLAND:** Shop strikes compounded bugs in these Klauder-designed Metropolitans. The trading of blame turned into a donnybrook for a time.

must recognize them in *less* than a second.' Well, that's impossible, and in the end they scrapped their requirements.

"On the PATCO job, the consultant set up deceleration rates that the trains couldn't meet in adverse weather conditions. I mean physically couldn't meet. So that had to be changed, too."

"As it happens, I have respect for that consultant. But even if he's 99% of a genius, he's still got to acknowledge that 1% of the time when he's not, and be a little more tolerant of others."

It is not only the manufacturers who are saying this sort of thing. J. M. McGuigan, chief mechanical officer of the Penn Central, says the brakes should be put on many consultants "who in their eagerness to please Federal and local agencies, introduced complexity beyond all reason."

McGuigan has spoken bitterly of the high out-of-service ratio of Metroliner cars, which in his words, is the result "of building too many cars, with too high a performance specification, too soon." (To get a New Tokaido-type line, you've got to spend New Tokaido-type money.) For example, McGuigan faults the location of dynamic brake grids under the car instead of beneath the roof, and finds control circuits unnecessarily complicated. What's more, technicians have to ride each and every train, for trouble-shooting purposes.

McGuigan says further that he's alarmed at the climb in new car prices, and mechanical officers should try their best to keep design and specifications "as simple as possible."

R. G. Davidson director of planning and construction for Boston's Massachusetts Bay Transportation Authority, says flatly: "A lot of the new equipment—signaling, air conditioning—is costly both to buy and maintain. We need equipment that is proven."

Edson L. Tennyson, Transit Commissioner in the Dept. of Public Property of the City of Philadelphia, notes wryly that "In 1959, we bought 270 stainless steel elevated cars, with no consulting help. We have had almost no difficulty with them. In 1963, we bought 55 stainless steel commuter cars with the bare minimum of consulting help—and they are the most reliable cars around. Subsequent cars, involving consultants, have had debugging problems that are monstrous."

Disparaging words for the consulting fraternity come from an odd source—a consultant himself. But that's Kim L. Pollitt, who formerly supervised new car specs for the New York City Transit Authority, and is just setting up a shingle as a car consultant in partnership with two other well-known transit men: Perry Bollinger, former general manager, Transportation Div., at Westinghouse Electric, and John Tucker, a former NASA man who is an ex-engineering vice president at General Steel Industries. Says Pollitt:

"There is a distinct gap in the vehicle design and consulting area, which we hope to fill. The consultants have been creating high prices for new equipment without raising technical standards; all they do is add unnecessary gingerbread. They talk about higher performance,

and it's true in the sense of faster acceleration and deceleration, but not in reliability."

Less doctrinaire, but saying something similar is Jack Brannan, former chief mechanical officer of the Long Island, and now doing private car consulting work himself. Says Brannan:

"Bugs are nothing new. The old car fleets also had plenty of troubles when they arrived. Whose fault is it when there are bugs? A little of everybody—the consultants, the manufacturers, the customers. Consultants should tell their customers that there is a learning curve, and that they, too, are learning. For example, I have certain types of knowledge and experience about cars. I would never try to tell anyone that I knew about other types, for example welding."

"There have been vague and irresponsible rumors going around about BART. It WILL work."

**Walter S. Douglas**
**Parsons Brinckerhoff, Quade & Douglas**

"We're holding the suppliers' feet to the fire—and they don't like it. . . ."

**Louis T. Klauder**
**Louis T. Klauder & Associates**

Clearly, everyone isn't shouting hosannas at the consulting establishment. Two themes run through most of these comments: (a) the expertise of the consultants isn't what it's cracked up to be; (b) the consultants have an obsession with ever-greater complexity. Underlying both is another theme: chilliness or resentment toward a mandarin class that can bind and loose, that can dictate both to those who build and to those who operate—and the mandarins are subject to no effective review until it is too late. That is the *real* issue; the snafus and the peccadillos are isolated occurrences by comparison.

Indeed, there is danger in turning such sins of omission and commission into such a blanket condemnation that the consultants' own case gets overlooked.

There is a case for the consultants, and it rests on three main points:

—Operating bugs turn up in new car fleets where *no* consultants had anything to do with either cars or car interfaces.

—The bulk of the transit operators regard operating bugs as unavoidable when they modernize, and have confidence in the consultants they deal with. Some defend them loudly. (If nobody loves you but the public, meaning the customers, you must be doing something right.)

—The consultants have some strong counter arguments of their own.

It is also worth remembering who carried the torch in the dark days of the 1950s when the transit industry was universally considered a fossil. Parson, Brinckerhoff, Quade & Douglas made its first feasibility study for transit in the Bay Area; DeLeuw, Cather & Co. helped lay out the Toronto system. These moves went against the conventional wisdom of the time, were acts of faith, and they laid the groundwork for everything that came afterward.

A number of operating authorities do their car specifications in house. The Chicago Transit Authority is one of them, and C. E. Keiser, CTA's operations manager, says:

"We've had problems with our new cars, although the most serious ones have been straightened out. There was pressure to get them fast, so there were workmanship defects and some poor design. I'm inclined to be more critical of some of our manufacturers for not using the latest technology. From what I see, I can't be too critical of the consultants for reflecting the wants of prospective buyers of equipment."

The New York City Transit Authority has its own 1,000-man engineering force to design cars and a lot else in house. According to Daniel T. Scannell, executive officer, "Consultants are like instant coffee. You add them in to get a lot of design and engineering without an extra staff. We don't need them for cars, but the ones we have are either good or something less than expectations, but fair."

(NYCTA has its own share of car troubles. A batch of recent cars could not pass a squeeze test.)

Toronto Transit Commission is frequently singled out for praise as a well-run operation. According to W. H. Paterson, general manager, construction, "We have sufficient know-how to write a performance spec ourselves, so we do. But that doesn't mean we don't have shortcomings in the cars. There has been some trouble with components and electrical parts. We all have problems. My attitude toward the consultants is generally favorable."

The top man in Cleveland, Robert T. Pollock, general manager and chief executive officer of the Cleveland Transit System, is uniquely qualified to see the picture from different angles: he was president of consultant W. C. Gilman Co. for a time. Says Pollock:

"Consultants' fees always seemed astronomical to me until I became a consultant and saw the work they do. As a group I think they're outstandingly vital professionals. And they can be awfully helpful to a management making a presentation to its board. Yes, there are snafus sometimes. But the consultants can't know all things. In some cases there might be a guy in an operating position looking for an out."

Jackson Graham, general manager of the Washington Metropolitan Area Transit Authority, says he is satisfied with his arrangement for four general consultants in four over-all areas, with DeLeuw, Cather as general engineering consultant. Louis T. Klauder Associates is consulting directly on WMATA's cars.

Graham, an old Corps of Engineers hand himself, says he is aware of the debugging problems that plague cars and their interfaces. His way of getting around it is to have a two-step bidding procedure, with extensive technical proposals in the first stage, followed by detailed review, which can take months, followed by requests for price proposals. Says Graham: "This surprised the

(*Continued on page 50*)

# CP RAIL'S CALGARY YARD NOW ELIMINATES HAND-SETTING OF CAR BRAKES WITH RACOR HYDRAULIC TRAIN-HOLDING DEVICES.

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This Calgary yard is an unusual situation. There are other advantages for the average yard in remote control Racor hydraulic devices: (1) Noise is eliminated when pulling a string of cars through; (2) less wear on the abrasion rails, resulting in less maintenance, and (3) the engine requires less power to pull a string of cars.

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Circle 9 on coupon page 33

# Revamped from the trucks up, Auto-Train

By ROBERT D. BARTLEY, Associate Editor

Would you believe . . . purple trucks? Or Beef Wellington, on the house? Or, to quiet the kids, free hot dogs, or if that won't work, a pinball machine? Would you believe a car with bright yellow walls, a purple ceiling, cranberry carpeting, and the purplest purple seats you have ever seen in all your life? Finally, would you believe these—plus a lot more surprises—are all yours when you buy a rail travel ticket?

This is Auto-Train, the bold—almost brazen—concept that has come along to allow, for example, Dad to take Mom, plus a couple of the kids, plus the Ford, plus maybe Fido, too, from near Washington, D.C., to the central part of Florida, all the way by rail at a base cost of $190. The 870-mile, overnight trip calls for departure at eight p.m. and arrival at 11 a.m.

Auto-Train scheduled its inaugural run south for Dec. 6. Bookings on subsequent trains (they depart south-bound and northbound daily) have been running at a brisk pace, according to an Auto-Train spokesman. The enthusiasm of Auto-Train personnel is contagious One industry leader commented that he felt Auto-Train has all the essential ingredients for really boosting public confidence in rail passenger travel.

● **Equipment: It, too, is bold.** No less bold than the concept itself is the equipment operating on the Washington-Florida runs. Starting at the front, each train is powered by a pair of new General Electric U36B locomotives (altogether, five such units were purchased).

The first train consisted of 13 cars. More cars are expected to be added as they become available.

Cars making up the first train were: a dormitory-dome, lounge-dome, night club, buffet-entertainment, kitchen-dormitory, steam-generator, plus four sleepers and five auto carriers. Eventually, as many as 12 auto carriers may be required. Other types of cars are to be added, too—like "adults only" domes and special entertainment cars for young children and teen-agers.

All passenger-carrying cars chosen so far by Auto-Train to become part of its fleet were once members of an elite corps of nationally-known passenger trains.

Santa Fe, Union Pacific, Western Pacific and Seaboard Coast Line have all sold cars to Auto-Train. Although they were purchased after Amtrak had selected its 1,200 cars from the national fleet, the Auto-Train cars "were generally in excellent shape when they came to us," advises Robert Johnson, manager of Pullman-Standard's rail passenger and rapid-transit carbuilding plant in Chicago.

● **P-S puts the fleet in shape.** Thus far, all cars in the Auto-Train fleet, including the auto carriers, either have been or are being rounded into shape and brought up to Auto-Train's standard at the P-S plant. What P-S is doing to the cars is unlike anything one would expect to see in a rail car plant. It is true—the cars do have trucks which are painted deep purple. The rest of the car exteriors, including the stainless steel ones, are painted white with red and purple stripes. The roofs are silver. The ends of the auto carriers are painted purple. Asked A. Q. Olson, Auto-Train's chief mechanical officer, "Do you get the impression that we don't want anyone to mistake our cars for someone else's?"

P-S's Bob Johnson, who readily admits that, at first, the color scheme did not seem appealing to him, feels the cars "may have more razzle-dazzle" than any built new at the P-S plant in recent years.

The bright colors were selected to make Auto-Train "more exciting than anything people traveling by rail had seen before," says Mrs. Carolyn Settles, design consultant, who serves as color coordinator for Auto-Train. "A lot of people think Braniff is an exciting airline because it's colorful. We want the same thing to happen to Auto-Train."

● **Consistency in color.** Auto-Train remains consistent throughout with its color selections. Almost everything relates to the exterior color scheme in some way. The tickets and the hostesses are color-coordinated, too. The latter have a variety of costumes to wear to suit the job they are doing, and, of course, purple is the dominant color.

There is no doubt but that the exterior colors of the trains are bold. On the other hand, one could hardly call the interior color scheme timid. Reds, yellows, blues and oranges are used liberally throughout. Perhaps even more daring, however, are the functions of some of the cars. Take the night club car, for instance. Upstairs in this former Santa Fe full dome car, P-S craftsmen installed deep blue carpeting on the walls as well as on the floors. Cocktail tables and new seating have been installed to help provide an actual under-the-stars night club atmosphere. Space is set aside at one end for a combo, and one of two such night club cars in the fleet has a player piano for, among other things, sing-alongs. The other night club car has a regular piano. Piped-in music is another feature. The night club

# brings glamor back to the rails

cars stay open until 3 a.m.

The buffet-entertainment car captures the imagination, too. This is the car with the yellow walls and purple ceilings. This car, too, is the one where Beef Wellington is served, along with lobster and other exotic dishes. The food is free. So are the movies shown when food is not being served. The food is served up buffet-style from a steam table installed at one end of the car.

A kitchen-dormitory car is part of the train consist now, primarily because of a need for additional space. Eventually Auto-Train hopes to be able to do away with this car, and consolidate all food preparation in the buffet-entertainment car. In a manner similar to that of the airlines, Auto-Train is having the food catered, with Marriott providing the service.

● **And for the kids . . .** Although there was not one on the first Auto-Train, the entertainment cars for the younger set which will be coming along later are most unusual. These are the cars which will have pinball machines. Also, each car will have a soft drink dispenser and a juke box. The floor in one section will be covered to permit dancing.

In another half of the car, toddlers will have their romper room, which will be amply furnished with toys and games.

Throughout the train travelers can find huge, comfortable reclining seats, more leg-room than can be found in a 747, and certainly more than can be found in the family automobile.

Washroom facilities in virtually all the cars have been modernized at the P-S plant. New Vapor Corp. chemical toilets have been installed in most of the cars, and the dormitory facilities for Auto-Train personnel have been enlarged and upgraded.

● **Auto cars re-worked.** The auto carriers in which the likes of Dad's Ford makes its journey to Florida, or back, are somewhat unusual, too. These 75½-foot, fully-enclosed double-deckers were once part of the Canadian National's auto transporter fleet. Designed for end loading, the cars—28 of them altogether—probably required as much mechanical and structural re-work at the P-S plant as any in the entire Auto-Train fleet.

First of all, the 50-ton cars had to be converted from plain to roller bearings, long-shank couplers were added and the entire draft sill area had to be altered. The braking system, too, had to be upgraded. Because the cars would be operating in a passenger train, the trucks which came with the cars had to be taken out altogether. They were replaced with trucks taken from REA refrigerated box cars which could operate at passenger-train speeds. New roller bearings, as well as new wheels and axles were added.

Because of the switch in the type of trucks, new body center plates were installed on the cars.

P-S engineers also made several design changes inside the auto carriers. New auto guidance channels, one per deck, and easily-adjusted wheel chocks to hold the autos snugly in place were developed by P-S, along with special aluminum bridge plates that permit circus-type loading and unloading. Because of the varying auto wheel bases which were apt to be encountered, P-S engineers had to design wheel chocks which could be adjusted over a wide range. Auto-Train personnel, and not the customer himself, load the autos aboard.

Auto-Train's northern terminal is in Lorton, Va., near Alexandria and Interstate 95. The southern terminal is in Sanford, Fla., about 37 miles north of new Walt Disney World, and about a 3½-hour drive from Miami. Special loading and unloading facilities have been constructed at the terminals by Swindell-Dressler.

The bulk of Auto-Train's own maintenance force will be located eventually at the two terminal points, says Auto-Train's Olson, a former SCL maintenance supervisor. His force will handle such things as running repairs and some of the servicing. Heavy repairs are to be contracted out to the SCL.

● **Crews from SCL.** Operating crews on the trains are SCL employees. Crew changes are made at Rocky Mount, N.C., Florence, S.C., and Savannah, Ga. Florence is also a 500-mile inspection point. Other onboard personnel, as well as the ticket agents, are Auto-Train employees.

To meet the deadline for the inaugural runs, P-S shipped out all the cars for the two trains (except the sleepers) in late November. Additional cars will be shipped as they are completed.

For many of the cars serving in the Auto-Train fleet, it has been like a homecoming when they arrive at the P-S plant in Chicago for upgrading and refurbishing. Take the steam-generator cars, for example. They were built originally by P-S for the Santa Fe. In the case of the steam-generator cars, Auto-Train has elected to have three available, although only one per train is required. The extra one, Olson advises, will be kept at the northern terminal to keep cars warm in the winter as they await coupling into the train. ■

MOVING PEOPLE

# Atlanta's timetable: First trains due in '77

A little more than five years from now—early 1977, if all goes as planned—the first rail transit train will be running in Atlanta, Ga. It will take that long to complete final design and engineering, buy the land, build lines and stations, and get delivery of rolling stock.

But Atlantans are not overly concerned about timetables at this point. The important thing is that after long years of striving against odds that often seemed insurmountable, and after two earlier rebuffs at the polls, they have now won the necessary vote of confidence. Financing of a $1.32-billion transit system now appears to be assured.

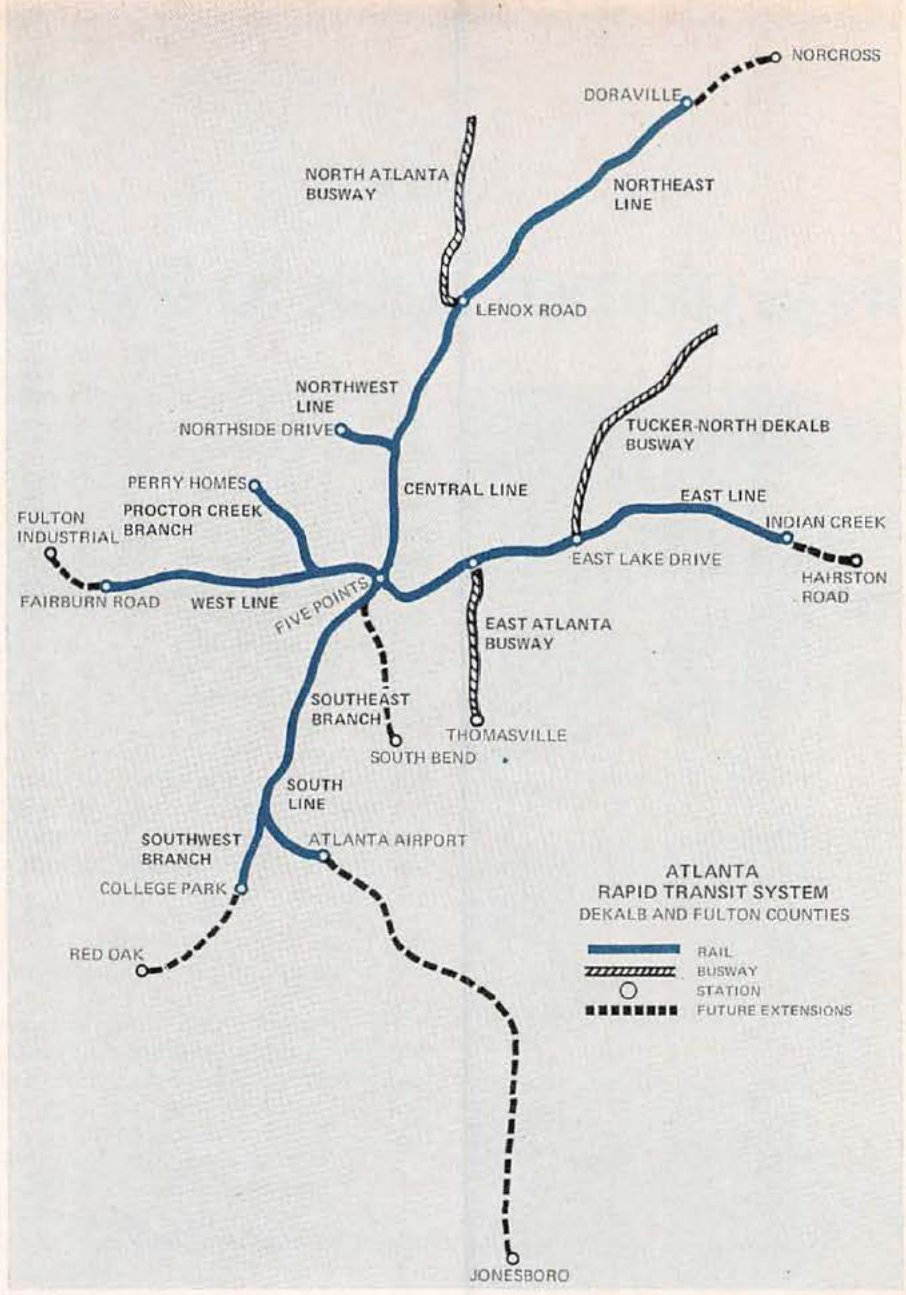
It was by the narrowest of margins that the latest transit-financing proposal—calling for imposition of a one-cent local sales tax—carried in the two key counties, Fulton and DeKalb. The vote was so close, in fact, that recounts were necessary. The final tally showed that in Fulton County, where the bulk of the city lies, the vote was 53,793 for the transit program and 53,372 against. It was only a 50.2% yes vote—but a simple majority was all that was needed. In DeKalb the vote was 39,565 for (52.2%) and 36,207 against.

Two adjoining counties, Gwinnett and Clayton, defeated the proposal. Clayton voted 3,330 (23.1%) for transit and 11,117 against. Gwinnett recorded 2,500 pro votes (20.8%) and 9,506 anti. But the defeat in these counties meant only that the rail rapid part of the system will be 50 miles, rather than 56; and that the price tag will be $1.32 billion rather than $1.4 billion.

How did Atlanta win a favorable vote in the face of such opposition as that mounted by former Georgia Governor Lester Maddox? (Maddox had warned voters: "This rapid transit's main motive isn't transportation. It's racial integration of the suburbs first and transportation second. It's just like the school-integration issue, where the motive is integration first and education last.") And how did Atlanta persuade voters to impose a new tax upon themselves at a time of general rebellion against higher taxes?

Other cities searching for ways to finance mass transit want to know the answers. Two of them—Denver and Baltimore—have already sent emissaries to Atlanta to look for clues. Others are interested—so much so that the Metropolitan Atlanta Rapid Transit Authority is considering holding a seminar so that everybody can look for answers at the same time—and let MARTA get on with its main task of implementing the voters' decision.

The first part of this task will be to implement the new tax levy. Under the law, this cannot be done until three months after the vote—sometime in the spring of 1972.




**50 MILES OF RAIL,** 14 miles of express busways, will be included in Atlanta system.

Otherwise, MARTA's timetable is this:

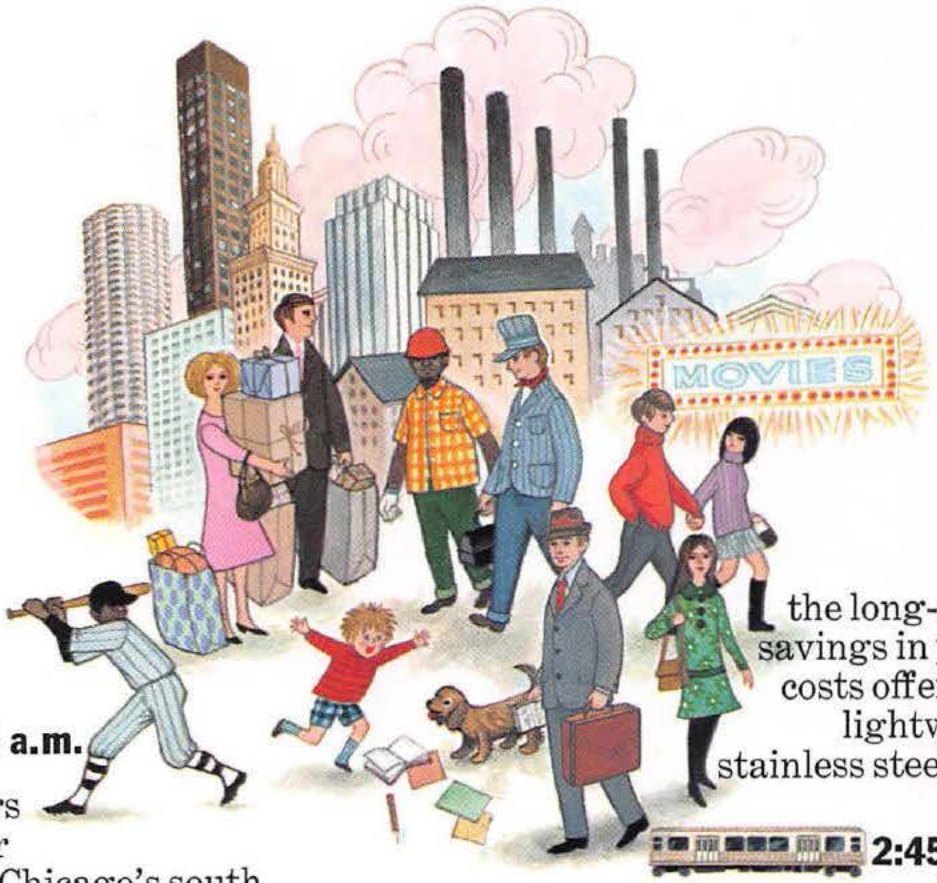
—Mid-1972: Acquire the existing Atlanta Transit System.

—Early 1973: Make improvements to the existing bus system. These improvements will include the purchase of up to 490 new air-conditioned buses.

—Mid-1973: Acquire rapid transit rights-of-way to be used initially as parking lots for bus patrons.

—Early-1977: Begin revenue service on East-West rail lines between the Avondale and Hightower Road Stations; open the Proctor Creek Branch for revenue service; and put the Tucker-North DeKalb and East Atlanta bus rapid lines into operation; open the South Lines to Lakewood Station for revenue service. The rest of the 64 miles of rail rapid and bus rapid lines are to be phased in through early 1979. ■

# A day in the life of a CTA car.




**6:05 a.m.**

Steelworkers begin arriving for the early shift on Chicago's south side. Nickel stainless steel gives the Chicago Transit Authority's newest fleet of cars enough brawn to serve riders dependably for years to come.

**7:50 a.m.**

The white-collar migration to the Loop surges and peaks. Cars carrying up to 150 passengers cannot compromise on safety—and the stainless combination of high strength, light weight and corrosion resistance is unique in its price range.

**11:20 a.m.**

Shoppers descend on stores like paratroop divisions. Bargain hunters in the railroad industry appreciate the long-range savings in power costs offered by lightweight stainless steel cars.

**2:45 p.m.**

School's out. Stainless interiors withstand the hard knocks of horseplay longer and stronger than other materials. Stainless steel never needs painting or repainting. Lipstick and crayon scribbles come painlessly off stainless.

**7:30 p.m.**

Curtain time at the movies, and the good bleacher seats at Comiskey Park are filling up. Over 100,000 Chicagoans ride stainless CTA cars to work and play every day.

CTA's 150 new stainless steel transit cars will give Chicago safe, comfortable, dependable, economical service for decades. Shouldn't your city keep up with Chicago?

For more data on nickel stainless steel transit cars, write to Dept. RA1271, The International Nickel Company, Inc., One New York Plaza, New York, N.Y. 10004. In Canada, The International Nickel Company of Canada, Limited, P.O. Box 44, Toronto-Dominion Centre, Toronto 111, Ontario.

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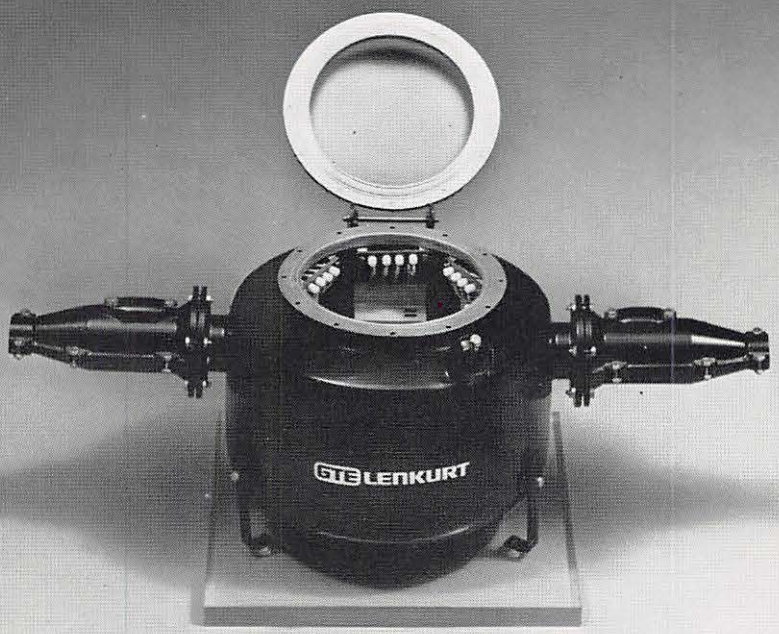


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There's a lot more to know about the 46V. Three bandwidths are available, providing from 300 up to 2700 voice channels depending on the multiplex allocations used. The highest capacity system can transmit a color television channel and 1200 voice channels simultaneously. The 46V uses 0.174″ coaxial tubes for medium length systems and 0.375″ coaxial tubes for longer systems. The system also meets CCITT specifications. And the average noise on a typical system is 1.5 pWp/km, or less.

Designed by Siemens AG of Munich, Germany, and proven in installations throughout the world, the 46V has a unique repeater that compensates for the variations in cable attenuation as a function of cable temperature. These temperature-regulated repeaters provide a more economical repeatered-line with better data handling characteristics than possible if only pilot-regulated and fixed-gain repeaters are used.

The temperature-regulated and pilot-regulated repeaters have identical plug-in connectors for easy installation in compact underground housings. Wider bandwidth repeaters can be readily substituted to accommodate future needs. Or, just bury it and forget it.

Combined with GTE Lenkurt's new 46A3 Multiplex, the 46V offers you the most advanced, reliable coaxial cable transmission system available today.

If you'd like to know more about the 46V, and the 46A3 Multiplex, just phone: Atlanta (404) 261-8282/ Chicago (312) 263-1321 / Dallas (214) 363-0286/Falls Church (703) 533-3344 / San Carlos (415) 591-8461. Or write: GTE Lenkurt Incorporated, Dept. C720, 1105 County Road, San Carlos, CA 94070.

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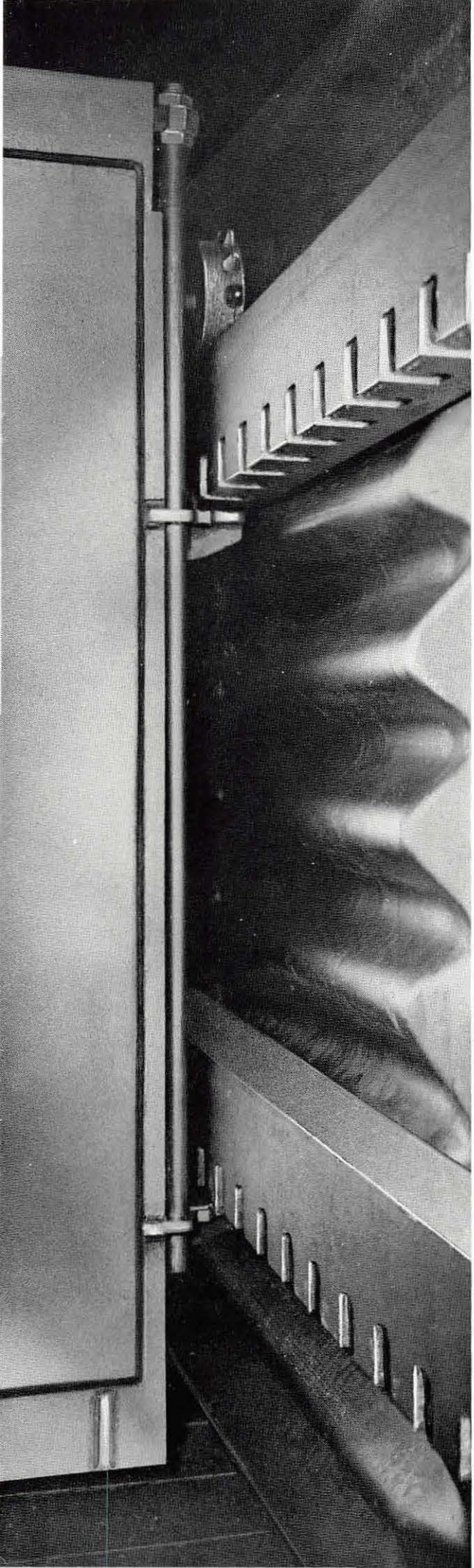
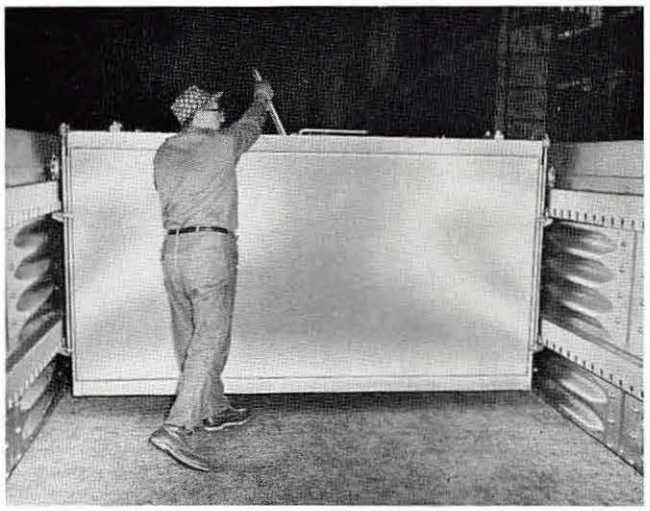


# Stanray's Automatic Locking Bulkhead

## Super tough. Yet, one man can push it around.



Cuts set-up time to a fraction. One operator can easily move the bulkhead and lock the bulkhead into position with a minimum of time and effort. He simply raises a handle, and easily rolls the bulkhead to its new position (reset in 2-in. increments). When the handle is released, the bulkhead automatically locks into the belt rail. All of the locking mechanisms are gravity activated.

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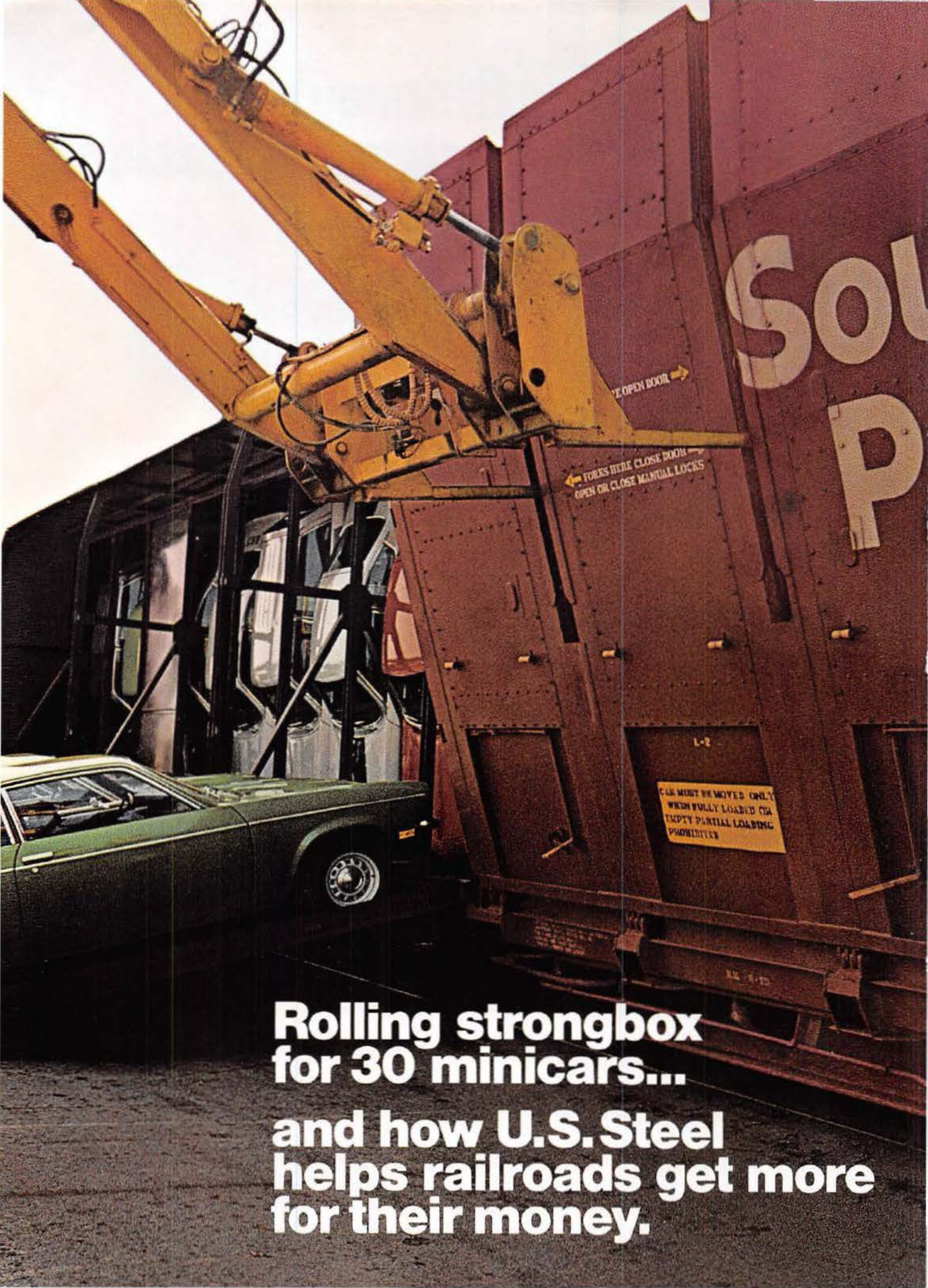
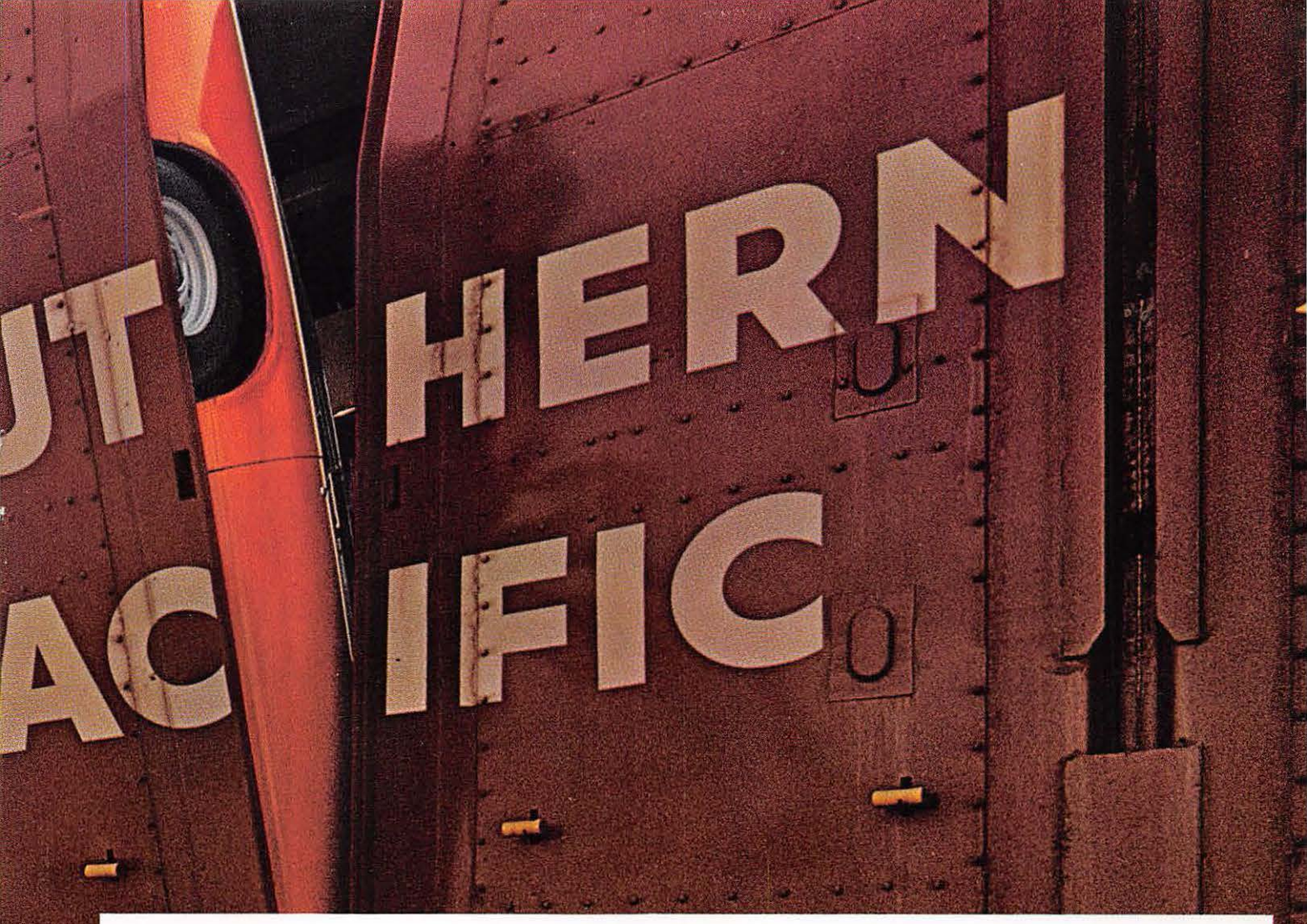



# Rolling strongbox for 30 minicars...

# and how U.S. Steel helps railroads get more for their money.




This giant freight car, Vert-a-Pac, hauls 30 little autos in scarcely more space than the usual tri-level rack car needs for 12 of standard size.

Southern Pacific and a major auto maker developed the 18-foot-high car to carry the 14-foot-long autos in a revolutionary position: nose-down on walls that also serve as loading ramps.

To cut the weight of this rolling strongbox (Vert-a-Pac is virtually vandal-proof and dirt-proof) the designers chose USS COR-TEN A Steel. This high-strength, low-alloy steel is 40 per cent stronger than carbon steel, has 5 to 8 times the resistance to atmospheric corrosion and gives twice the paint life.

It's used in the built-up center sill of the basic flat car (prime contractor: ACF Industries) and in the above-deck auto housing (subcontractor: St. Louis Car Division, General Steel Industries, Inc.). We're supplying steel—and good advice—on a lot of other projects important to the railroads: cars, rails, bridges, buildings.

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**New finish fights axle fatigue.** As car weights and speeds go up, so does threat of axle fatigue. Our new standard finish (100-micro-inch average) fights it best. Data on request.

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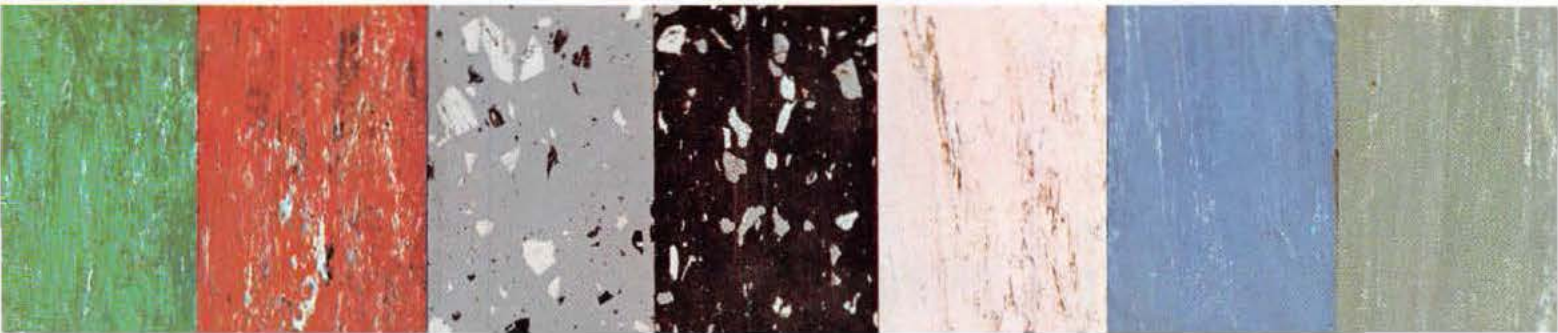

# New Products Report

**Rubber door edges** (RA-1)

Rubber door edges, or shoes, which assure passenger safety and insulate against heat or cold operate in conjunction with constant-pressure, differential-type, electrically-controlled pneumatic door operators. The Vapor Dor-Trol system incorporates this sensitive-edge mechanism for passenger protection. Doors are retracted when two springs, running the length of the door inside the pliable shoe, touch each other as the edge makes contact with a passenger or object. Rubber edges are fastened to the door by rivets and metal stripping. Inside each leading edge, a strip of polyurethane foam holds the coiled-spring assembly. The edges are of a special rubber compound that has weather- and scuff-resistant characteristics with a lightweight cotton-duck reinforcement controlling the pliability and preventing cracking, stiffening, stretching or softening. Life is estimated at 10 years. *Raybestos Manhattan.*

**Discharge gates** (RA-2)

Gravity Discharge Slide Gates in three different openings and with an optional Cam Lock have been designed for 4427, 4750 and 5250 cu ft covered hopper cars. The gates feature rack and pinion operation with positive lock and mechanical seals to assure protection of lading. To facilitate unloading, the gate may be operated from either side. Choice of openings includes 24 x 24, 24 x 30 and 30 x 30 in. Forgings provide strength in the assemblies. The optional Cam Lock mechanism automatically locks the gate when it is in a closed position to prevent accidental opening when the car is impacted. An added safety feature is an L-shaped lever which secures the cam in its locked position. *W.H. Miner Division.*

**Locomotive crane** (RA-3)

Hydraulic traction drive on the American Model 7040 DH locomotive crane now permits simple positioning of the travel lever at a specified speed setting to accelerate the crane quickly to that speed and hold it there. When the travel lever is returned to neutral, hydraulic braking stops the crane. The hydraulic drive provides full power at preselected speeds, more drawbar pull at all speeds, reduced wheel slip and reduced wheel wear. The hydraulic system is completely enclosed. Hydrostatic swing is standard on the new crane; operation instantly controls torque for light or heavy loads. "Plugging" the swing lever causes hydraulic pressure to brake the swing smoothly. *American Hoist & Derrick Co.*

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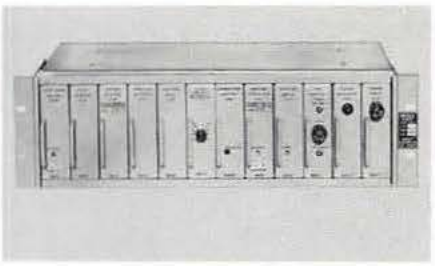
Inquiries can be processed only if title and company are shown. 12/13/71

### Base station control (RA-4)

A waystation radio control system is designed to permit a dispatcher to control a number of wayside radio base stations by tone signaling on the dispatcher's line. This provides direct communications between the dispatcher and the trains operating within his jurisdiction.

By selection of particular two-tone combinations, the dispatcher is able to select any wayside radio bay station on the line and then perform all necessary functions to control the radio. The tone signaling is done only in short bursts so that there is no interference with voice communications on the line.

A summary of the operating features of the system is as follows: (1) Permits selection and control of up to 20 radio base stations on a common party line or voice circuit by a dispatching site; (2) provides push-to-talk operation by the dispatcher over the voice circuit between the base station and radio mobile; (3) provides two-channel switching of the base station radio, i.e. Channel 1 or Channel 2; (4) provides automatic revert to Channel 1 when station is selected by the dispatcher; (5) provides time out



(preset 20 to 200 seconds) on push to talk with warning light on the time out at dispatcher site; (6) provides ring back tones from the waystation to the dispatcher and the mobile. Ring back tones coded for station identification; (7) provision for mobile to signal the dispatcher. Station identified at in (6); (8) provision is made for operation of a base station radio which is remote from the waystation drop site; (9) the base station may also be operated by a local operator; (10) any or all base stations may be operated simultaneously for conferencing; (11) a cancelling or release signal is provided; (12) each base station may be operated from three lines. The second and third line control facility is optional. *Bayly Engineering Ltd.*

## NEW LITERATURE

**MAINTENANCE CLEANING.** A new brochure from Oakite Products, Inc., outlines, in convenient chart form, specific railroad cleaning problems, then details Oakite procedures that solve them. (NL-1)

**AXLE PIT-SCALE SYSTEM.** A new low-cost axle pit-scale system which offers easy installation, low maintenance and that requires no external power source, is described in a Martin-Decker Co. brochure. The system, called "Hydraflex," comes ready to install in a shallow pit or under a weigh bridge. (NL-2)

**ENGINE PREHEATERS.** Detailed specifications and application data of Kim Hotstart engine preheaters for diesel-locomotives and large industrial engines are presented in a Kim Hotstart Manufacturing Co. brochure. (NL-3)

**EXTENSIBLE BOOMS.** A new folder which tells how to convert a standard fork-lift truck into a versatile mobile crane has been issued by FMC Corp.'s Link-Belt Material Handling Equipment Division. (NL-4)

**OUTDOOR HEATER.** A bulletin from Van Dorn Co.'s Infra-Red Division describes the all-metal, gas-fired, 60,000-Btu infra-red outdoor heater called Model OD8215. The heater is designed for, among other things, loading docks and to prevent snow accumulation. (NL-5)

**MOBILE RADIOS.** An 8-page brochure from General Electric's Mobile Radio Department describes two-way radio equipment engineered for low life-cycle costs. (NL-6)

**PNEUMATIC CONVEYING.** Sprout, Waldron & Co. has issued a 20-page bulletin describing six different types of pneumatic conveying. A description of each gives preliminary guidance in selecting the proper system for an application. (NL-7)

**RAILWAY PRIMER.** A 60-year-old sales piece, "The Rail Equipment Primer," that doubles as a sales message and political commentary, was recently discovered and reproduced by Chicago Railway Equipment Co., an operating unit of the Evans Products Co. Railway Equipment Division. The booklet, designed in the form of an elementary school primer, contains a dialogue between a young child and his father who witness a train wreck resulting from failure of a "conventional" brake beam. (NL-8)

**METAL V-SEALS.** A new brochure, "Engineering Guides for Metal V-Seals," has been released by Parker Seal Co. It contains diagrams, charts and tables which help the reader select metal seals and material combinations, and in dimensioning the mating gland. (NL-9)

**SIGN PANELS.** Fiberglass-reinforced polyester sign panels called Empro are illustrated and explained in a new 4-page brochure from Kemlite Corp. Empro signs are used as fleet markings on rail cars, trucks, trailers and containers. (NL-10)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**ONE CONSOLE** has all controls and indications for classification. Track selection is the conventional pushbutton type.

## EAST LOS ANGELES YARD:

# UP applies minicomputer

Union Pacific's new, $2.8-million East Los Angeles yard is operating in a "highly satisfactory" manner, handling 400 to 500 cars daily, with minicomputer control of automatic car-routing, retardation and data-generation in cars handled in the 16-track facility. Prime contractor for the minicomputer control system was General Railway Signal Co., which also furnished the retarders, switch machines, cab signals and other equipment.

The main function of this yard is to reclassify incoming trains and block them for distribution to area industries and other railroads. Mainline incoming traffic is from Pocatello, North Platte, Chicago, Kansas City, St. Louis and Omaha. Local incoming is from the harbor, including overseas containers; from area industries; and from Santa Fe, Southern Pacific and Los Angeles Junction Railway. No particular lading predominates; loads vary widely, including hides, chemicals, building materials, scrap metals and autos, to name a few.

In the yard office, at the west end of the yard, incoming cars are listed and a punched card is generated for each car. Tracks are assigned, most commonly according to a pre-established pattern. Switching lists and punched cards are sent to the crest office by pneumatic tube. A clerk, working on the other side of the cars from the pin puller, staples the appropriate punched card on each car.

**ACCESS TO MINICOMPUTER** at East Los Angeles is provided through teletypewriter. Portable recorder at left serves to graph actual release speeds.

The master and group retarders are weight-automatic, single-rail, hydraulically-operated GRS type F4. There is a single-rail, weight-automatic skate retarder at the end of each class track, a type F4, the same type as used in the master and groups, but inert instead of hydraulically-operated. Switch machines are GRS model 6, trailable, high-speed electrics. All class tracks are equipped with special circuits to indicate track fullness (distance to couple) information which is used by the automatic retarder-control computer and is also available as a readout on the crest office console as an assist to planning yard operations.

A single console in the crest office has all input and supervisory controls and readouts. In addition to the standard hump and trim ground signals, each of the two pusher locomotives has a radio-controlled cab signal controlled from the crest console. Track selection is the conventional pushbutton type with a lighted digital display with capacity to show four selections.

The minicomputer is a high speed, 16-bit process-control computer, which is mounted on slides for easy access to all printed circuit boards. The entire computer is contained on four circuit boards, which can be changed out in a few minutes. Access to the computer is either through a teletypewriter or by means of switches and lights on the computer front panel. The teletypewriter is capable of reading and punching paper tape—the usual form of program loading. ■

# Watching Washington

REID BEDDOW

## CHRISTMAS PACKAGES

Congress has begun to act on the array of rail proposals now before it. Measures concerning a national freight car corporation, Amtrak, and DOT's high-speed ground transportation program were approved in subcommittees in recent days. On top of this, the investment tax credit —7% on equipment ordered after April 1 or delivered after Aug. 15—survived in an omnibus tax bill which President Nixon can sign. A Senate-added provision which applies the credit to track purchases was okayed by the House. A final sweetener is the unprecedented revolt Dec. 2 by House members of both parties against their leadership which released $72 million in blocked local matching funds. Washington Metropolitan Area Transit Authority officials can now go ahead and open bids for their first 300 cars in early March.

Of the three bills approved by Senate or House transportation subcommittees, the least controversial is H. R. 11384 which removes the termination date of DOT's high-speed ground program (necessary for long-range contracting) and authorizes for research at the Pueblo test center and elsewhere $97 million in fiscal 1973, $124 million in 1974, and $92.2 million in fiscal 1975. Its ultimate passage is sure.

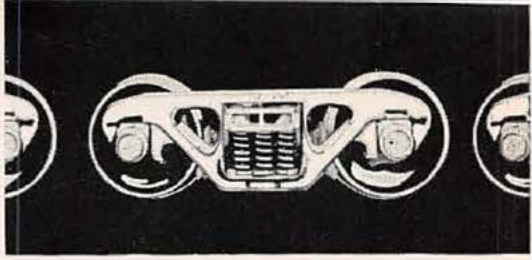
## NEW YEAR HANGOVER?

The freight car corporation bill approved Nov. 25 by Sen. Vance Hartke's Surface Transportation Subcommittee is S. 1729, the so-called Fastcor plan first advanced by labor. AAR's bill, S. 1730, creating a rail- and privately-oriented car corporation is thus dead. As it emerged from subcommittee, however, S. 1729 was rewritten. In its new form, Fastcor would receive $10 million to $30 million from rails via a per diem surcharge, $10 million from Federal acquisition of its stock, and Federal loan guarantees for $3 billion to own and manage a pool of general service freight cars. AAR President Stephen Ailes is named one of five incorporators, and the President would appoint three of 11 directors on AAR recommendation. Importantly, Fastcor would be subject to ICC car service rules and "shall follow industry practice in distributing car building and rebuilding work as between railroad and private car shops." Interestingly, the new bill provides a method whereby the Federal government could pull out after four years, reducing Federally-named directors from 11 to three. Private stockholders would assume control on conversion of the U. S. stock.

The Amtrak bill, S. 2760, also approved Nov. 25 by the Hartke Subcommittee, is a mixed stocking, too. The bill's main provision grants Amtrak $170 million for operating expenses between now and July 1973. No one opposes this. However, the bill was amended to (1) extend the time from July 1973 to July 1975 that Amtrak must provide service over its designated basic system; (2) give Amtrak trains priority over freight trains, and (3) allow Amtrak the right to provide intercity service over any line of a railroad. The subcommittee defeated an amendment that gave Amtrak direct control of operations and operating employees.

Circle 14 on coupon page 33 ►



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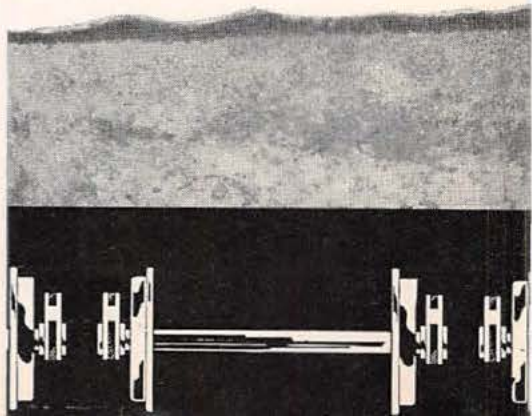
With our broad range of products and world-traveling network of field engineers, we can readily "customize" the design, manufacture, installation and operation of a SERVOSAFE system to best meet the particular requirements of your railway.

You are invited to contact us for complete descriptive literature, or to arrange a field engineering site survey and application review—without obligation, of course.



# Hot box hide-n-seek. A dangerous game.

Hot box hide-n-seek is an old game — as old as railroading itself. And the villain in the game is the overheated journal that you can't find until it's too late — that's when it worsens into a really dangerous axle burn-off and costly derailment!

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SERVOLARM can be quickly and easily installed with a minimum of construction equipment and labor, while eliminating long distance wiring and extensive communication equipment costs.

If you're looking for an easier and safer way to win the game of hot box hide-n-seek most of the time, take a look at SERVOLARM.

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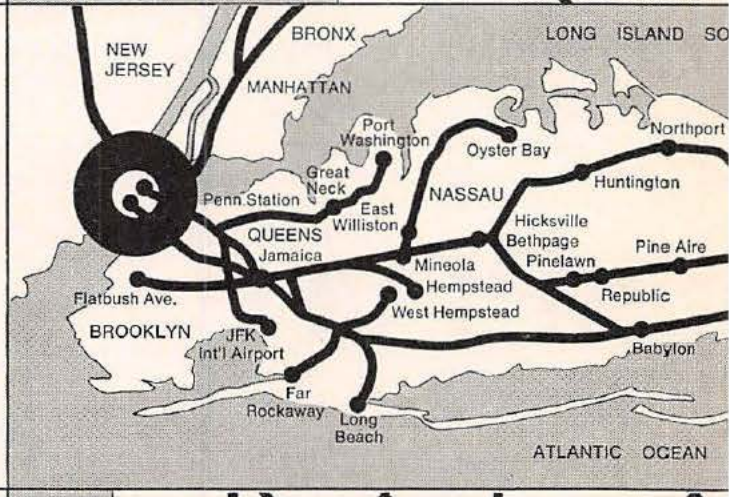
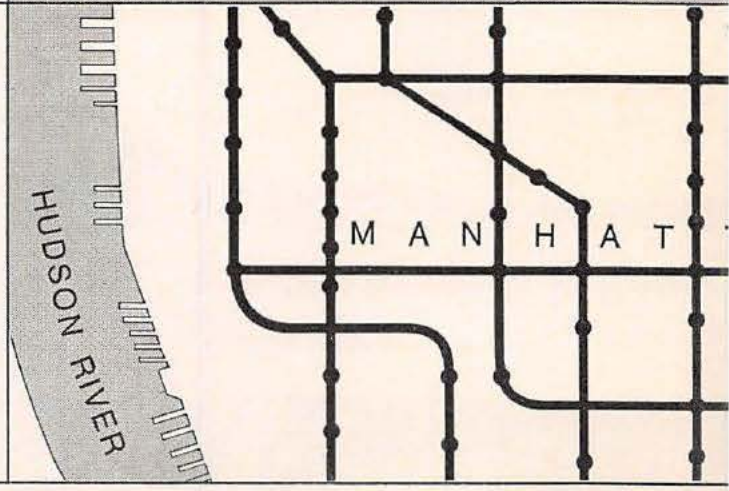



## Rapid intra-city, multiple-stop transit.



# & progress.

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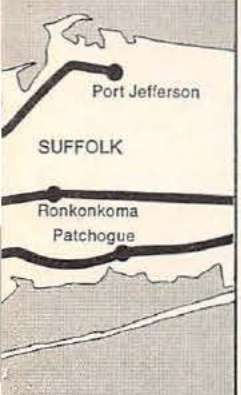


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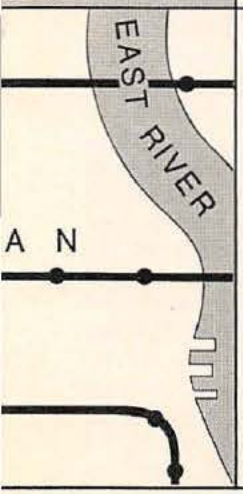
**Our fast, self-powered Turboelectric cars will provide efficient, non-stop service for suburban commuters.** Now planned for the Greater New York area our Turboelectric Propulsion System alternates between utility-generated power and onboard, turbine electric power. Automatically. Smoothly. Making fast, non-stop thru-service possible.

First tests of this dual mode system were in 1969 on the Long Island RR. The heart of this turboelectric system is the service-proven, Garrett 831 gas turbine engine which produces little noise and low emissions. The next step will be prototype evaluation on the Long Island RR with the same gas turbine engines installed in the Metropolitan GT-4 cars.

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**Our "Stored Energy" propulsion system is an immediate answer to intra-city rapid transit. New York City's MTA Chairman Ronan said, "It offers promise of making the entire rapid transit system more pleasant while saving money."** New York's Transportation Authority has reason to be enthusiastic about our "Stored Energy" system. Already in the planning and prototype-evaluation stage, it actually reduces subway heat. Brake noise is all but eliminated. Subway tunnels and platforms can be far more livable—at the same time system implementation can save millions of dollars annually in electrical cost.

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GARRETT

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# Crossties: Can supply meet the demand?

ONE ESTIMATE is that it will be necessary to produce and install more than twice as

By **MERWIN H. DICK,** Engineering Editor

Short-range, there is going to be a bulge in railroad requirements for crossties that may put a strain on production. Long-range, with the demand for crossties continuing in an uptrend, the prospective supply-demand relationship is less clear. But whatever else happens, railroads will find themselves paying more for wood crossties.

These conclusions are gleaned from addresses presented before the recent annual convention of the Railway Tie Association at Minneapolis. Of particular interest is the fact that, as brought out by Allen L. Sams, vice president and chief engineer, Illinois Central, the increased demand for crossties brought about by the FRA Track Safety Standards will come on top of an underlying surge in demand.

• **Needed: 130% more ties.** Noting that railroads have until Oct. 16, 1973, to fulfill FRA requirements as they apply to crossties, Sams said he was led to the conclusion that the tie industry "must provide more than 26 million crossties annually over the next two years in addition to the present output, an increase of over 130%." Speaking to the tie producers, he said: "I think you will recognize the difficulty in accomplishing this result. Even if you could supply the ties, the railroad industry does not have the machinery, manpower and financial resources to install them in track."

The trend of tie requirements, irrespective of the FRA Track Safety Standards, was then discussed by Sams. He said: "Normally the requirements for new, treated crossties can be predicted fairly accurately from installations in prior years. The number of ties installed annually follows a sine curve. The first significant peak occurred during World War II when 45 million ties were installed in 1944. There was a general decline in annual installations from 1944 to 1961 when the curve bottomed out at about 11 million ties. During the last decade there has been an annual increase to the present level of about 20 million ties in 1971.

"It can be shown mathematically that this curve should continue into the future, with the period between peaks approximately equal to average tie life and the same period between valleys. Also, it can be shown that the height of the peaks and the depths of the valleys should diminish as the curve flattens out at the level necessary to annualize tie installations.

"This reasoning presumes that nothing will occur to disturb the pattern of tie installations over the years. That will not happen, of course. Economic and other factors will create distortions.

"At this point we need not be concerned with the requirements several decades in the future but only during the next few years. There are now about 900 million ties in all railroad tracks in the United States. If we assume an average life of 35 years, then about 25 million ties annually would be required in replacement.

"Recognizing the peaking effect of the heavy installations during the 1940's it appears that annual crosstie installations should continue to rise from the present level of 20 million ties to perhaps 30 million or so by about 1980. If this trend were permitted to operate in an orderly fashion. I would expect that the crosstie industry could reasonably meet the increasing demand. Also, I could expect that railroads would find a means of absorbing the additional cost of these ties."

• **Effect of FRA standards.** "The imposition of track-maintenance standards by the FRA will change that picture," Sams said. "To meet these standards we would be required to produce and install more than twice as many ties as would normally be expected over the next two-year period."

Sams cautioned the tie producers against becoming "overly enthusiastic about future prospects," suggesting that first a look should be taken at some other aspects of the problem.

Sams said that "the present condition of our tracks is not the result of neglect; rather it has been caused by lack of funds for maintenance purposes during the last ten years or more. Railroad revenues have been insufficient to meet the needs of the industry.

"Subsidized competition, unfair tax treatment, inability to obtain relief from operation of unprofitable branch lines and, until a few months ago, large passenger-train deficits, are some of the burdens imposed upon the industry by our governments. Rate increases have been too slow and too small to offset the effect of inflation.

"These are the principal underlying reasons for the inadequate maintenance of our tracks and the large number of derailments resulting from track de-

many ties as would be normally expected.

fects. Now, the Federal government has imposed an additional burden on railroads without making provision for increasing revenues to meet that burden. In the absence of additional funds for track inspection and maintenance, our only alternative would be to reduce train speeds. The effect of this would be a further deterioration of railroad service and further loss of revenue.

"Obviously, this is not an acceptable solution. Railroads are a vital element in our economy. Their ability to continue operating effectively must be preserved. I cannot dispute the need for upgrading our tracks as FRA proposes. An essential part of that upgrading is many millions of treated timber crossties. The part of the crosstie people is to produce them. I am confident that we will find a solution to the difficult problem of paying for them."

Statements by W. A. Marshall, director of purchasing, Burlington Northern, had the effect of corroborating Sams' statements that crosstie renewals would continue to increase for some time in the future. Said Marshall: ". . . By the time we close the books on this year's activities we will have purchased approximately 1,800,000 crossties. Our plans for the next five years are greatly to increase our purchases until we reach a peak in 1976 of approximately 2,700,000 crossties, which level of purchases should prevail for several years. Barring any disastrous years financially, we expect indefinitely to be a significant factor in the nation's annual requirements for crossties."

● **Factors affecting supply.** What are the prospects that the country's forests will be able to supply the increased demand for crossties, as well as other types of wood products? Dwight Hair, of the Division of Forest Economics and Marketing Research, Forest Service, U.S. Department of Agriculture, implied that, to some extent, the growth in wood consumption would parallel increases in population and economic activity. As for population, he suggested that by the year 2000 the population of the United States would be around 280 million, a 40% increase over the present figure. As for economic activity, Hair expects there will be "very large increases . . . in the decades ahead."

Hair expects that the future consumption of wood will depend in part on many other factors "such as prices, technological development within the wood-products and competing industries and institutional changes. But if population and economic activity rise as described and technological and price trends do not differ significantly from competing materials, major increases in demand for wood can be expected. The most recent Forest Service projections, for example, indicate that under these assumptions, the demand for saw logs may roughly double, and for veneer logs and pulpwood nearly triple by 2000.

"So what is the present and prospective timber situation, and especially what is the outlook for hardwoods—the source of more than four out of five ties produced?"

● **Total inventory gains.** Hair used two criteria in developing answers to this question. One criterion was the total inventory of hardwood sawtimber. The other was the relationship between net annual growth and annual removals. Discussing inventory first, he said the hardwood situation in the last two decades or so has been showing marked improvements in response to effective fire protection and other related forestry programs.

"For example," he explained, "between 1953 and 1968, total inventory of hardwood sawtimber rose by about 14% to a level of 487 billion board-feet. Although most of this volume is in the smaller sizes of trees, and the less desirable species, nearly all of it is suitable for the manufacture of crossties and common grades of lumber."

He noted, however, that nearly all of the hardwood timber is in the East, and that the West Gulf and East Gulf regions were the only ones showing a decline in sawtimber inventories.

In discussing trends in the relationship between net annual growth and annual removal, Hair said that in 1967 the net annual growth of hardwood sawtimber size trees was 17.5 billion board feet—31% more than removals. He explained further that in 1967 the net annual sawtimber growth in the North was 1.6 times removals but in the South the net annual growth was slightly less than removals.

However, Hair is convinced that these aggregate inventory and growth-removal figures "to some extent overstate the volume of hardwood sawtimber physically or economically available for utilization. Hardwood sawtimber volumes are dispersed over not only the 269 million acres in the hardwood types but also as scattered trees in the softwood types. In addition, part of the hardwood timber in the East is in small private tracts used primarily for homesites, recreation or other nontimber purposes not compatible with timber harvesting: "Despite these limitations, it is clear that hardwood forests, especially those in the North, can support a substantial increase in the volume of cutting, especially from the smaller trees and more abundant species."

● **Ahead: Rising timber costs.** The supply may be increasing but so is the demand, Hair indicated. Projected supply does not rise as rapidly as projected demand over the next couple of decades, he said. "As a result, the margin between supply and demand begins to narrow. This means increasing competition for available supplies of timber and rising timber costs for lumber and other timber-processing industries."

He added: "The narrowing between demand and supply and the resulting effects could be accentuated by losses in the area available for hardwood timber production. Further land clearing of the kind that has been taking place in the bottomlands of the South, the expansion of cities, and withdrawals for highways, reservoirs, parks, and other uses could substantially reduce the growth and inventory of hardwood timber below the projected levels.

"In summation, data on the present and prospective timber demand and supply situation indicate the prospect of rising timber costs. The impacts are likely to be especially severe on the softwood lumber and plywood industries. Nevertheless, all industries, including the railway tie and pulp and paper industries, will be affected directly or indirectly by increasing competition for available wood supplies.

"It seems clear that unless we increase our timber supplies, the nation will be faced with rising costs of the products now made in whole or in part from wood . . . So what can we do to insure timber supplies and minimize the adverse economic and social impacts of rising prices? One of the major actions needed to increase supplies in line with demands is additional capital investment on both public and private forest land." ■

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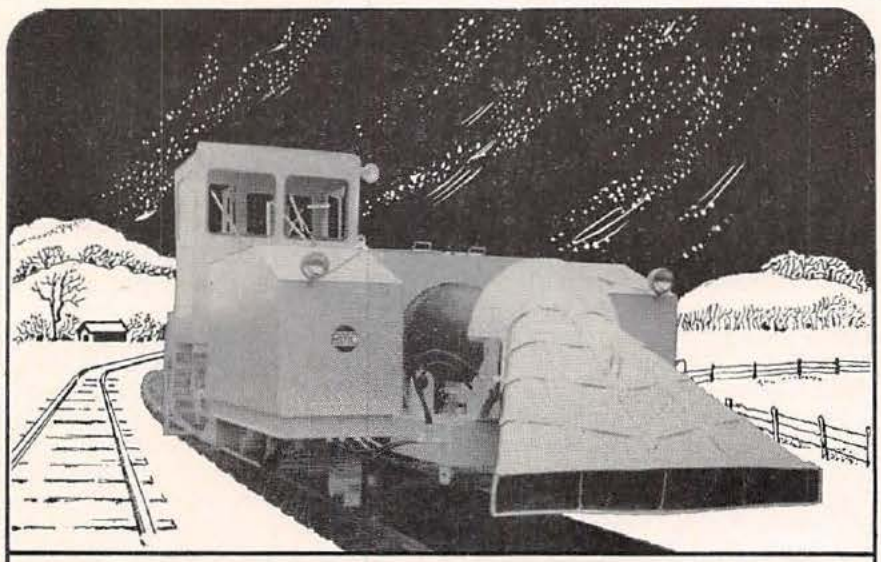

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■ RAILWAY MAINTENANCE CORPORATION, Box 1888, Pittsburgh, Pa. 15230.

RMC Snow Blowers

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# People

**ALASKA.—Walker S. Johnston,** assistant vice president–operations, **Burlington Northern,** Omaha, Neb., appointed general manager of the federally-owned **Alaska,** at Anchorage, succeeding **John E. Manley,** who will retire Jan. 1, 1972, after 35 years with that road.

**AMERICAN REFRIGERATOR TRANSIT CO.—Donald F. O'Brien** appointed assistant superintendent of transportation, St. Louis.

**ASSOCIATION OF CAR ACCOUNTING AND CAR SERVICE OFFICERS.—Ralph B. Flowers, Jr.,** auditor of car accounts, **Norfolk Southern,** Raleigh, N.C., elected president of the association.

**BOSTON & MAINE.—Hugh F. Vaughan,** director of security, Boston Mass., appointed director of safety and fire protection. **Vincent B. Curran** appointed director of security and freight claim. **Wallace H. Chaplin,** general superintendent motive power, Boston, promoted to chief mechanical officer—maintenance of equipment. **Raymond F. McCaffrey,** superintendent of shops, North Billerica, Mass., promoted to general superintendent motive power there.

**CANADIAN NATIONAL.—F. S. Hutton,** chief engineer, **Grand Trunk Western,** Detroit, Mich., appointed project manager, Great Lakes Region, CN, Toronto, Ont.

**W. D. Spencer,** area freight sales manager, Vancouver, B.C., appointed regional freight sales manager, Great Lakes Region, Toronto, succeeding **S. S. Wier,** promoted.

**F. H. Morrisey,** sales manager, Champlain Area-U.S., appointed sales manager, New England States, Boston, succeeding **C. E. Hayes,** retired.

**W. G. Monk,** superintendent equipment, St. Lawrence Region, transferred to the Southwestern Ontario Area, London, succeeding **J. H. Campbell,** promoted.

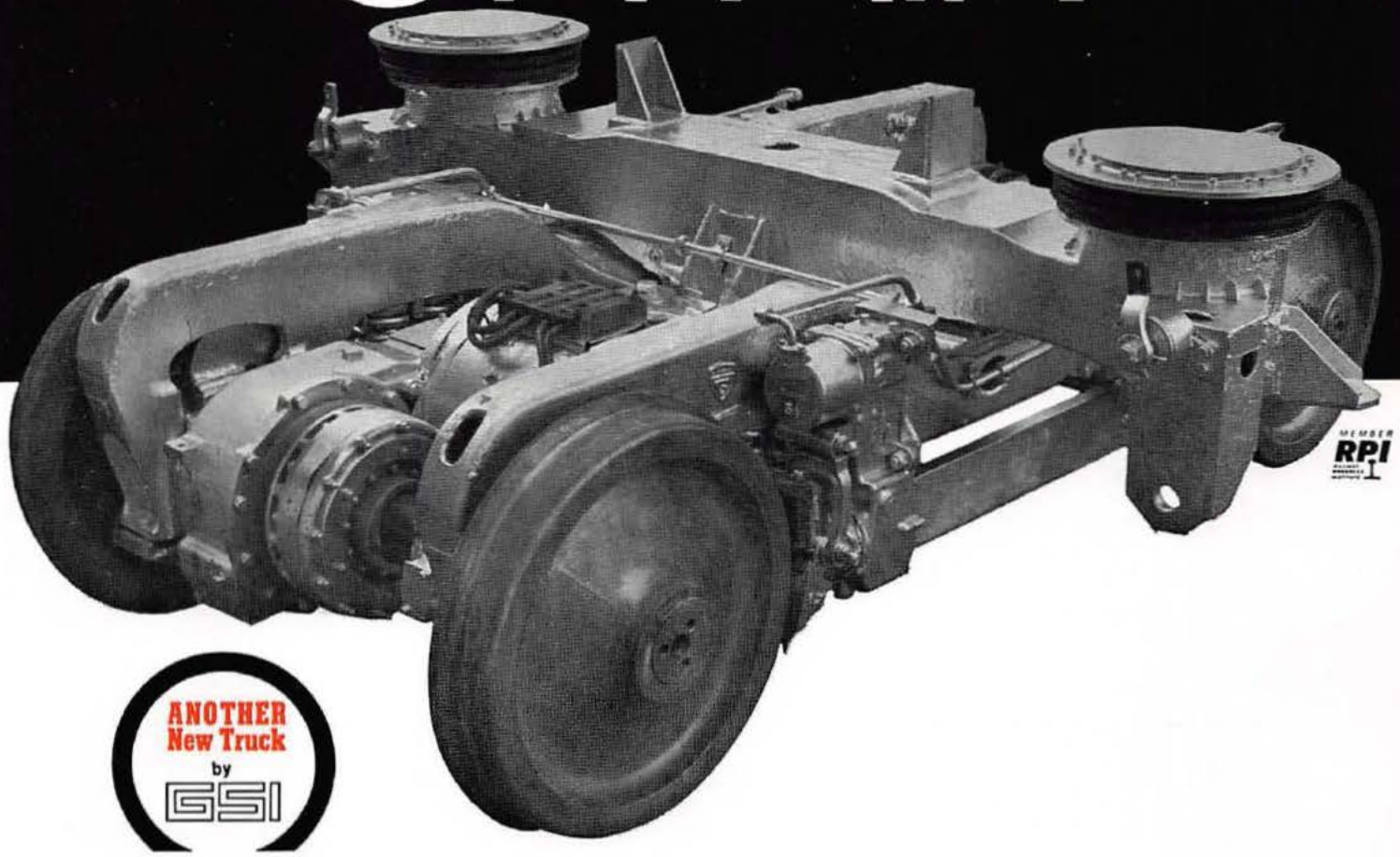
Title changes, St. Lawrence Region, Montreal: **C. M. Nelson,** bridges and structures engineer to regional engineer bridges and structures; **F. S. Barker,** engineer maintenance of way, to regional engineer maintenance of way; **R. L. MacKinnon,** signal engineer to regional engineer signals; **N. M. Engleman,** engineer administration, to regional engineer administration; and **V. G. Johnson,** assistant engineer maintenance of way, to engineer planning.

**DENVER & RIO GRANDE WESTERN.—T. L. Rudmann,** district manager, Houston, Tex., transferred to Pueblo, Colo., succeeding **C. M. Wildt,** who retired Oct. 31 after 42 years of service. **J. W. Barge,** district manager, San Francisco, transferred to Atlanta, Ga., to succeed **J. A. Stauffer,** who replaces Mr. Rudmann. **A. G. Shearer,** district representative, Sacramento, Calif., promoted to district manager, San Jose, Calif., succeeding **A. F. Holman,** who replaces Mr. Barge.

**GULF, MOBILE & OHIO.—Larry S. Hickman,** manager resources and industrial

*(Continued on page 56)*

# SHE'S RIDING ON AIR



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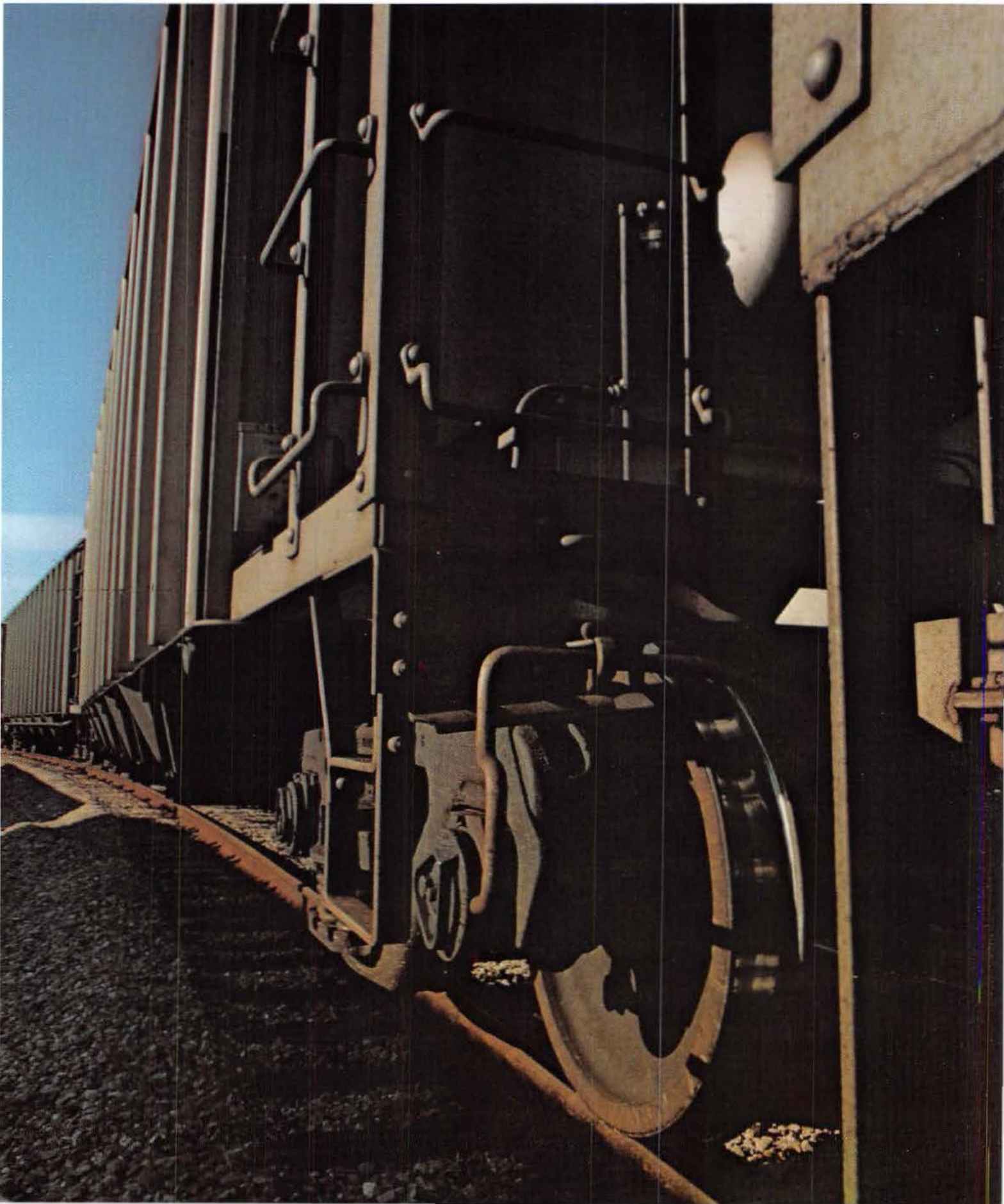
# Center plates pass



# grinding 17-month test.

**No major wear spots or galling showed up on plate maintained with Shell Center Plate Lubricant (see right). Railroads are saving thousands of man-hours and dollars with this unique product.**

When the center plate on the right was photographed, it had just completed 17 months on the job for a major road. It was cleaned with an air blower; swabbed with solvent. Look at it! Smooth. No galling. Only minor evidence of wear.

After 17 months of horseshoe bends and S curves; after 68 weeks of rocking and swiveling under loads up to 110 tons, this is really something! Yet, it's typical. We spot-checked the plates of many of the thousands of cars maintained with Shell Center Plate Lubricant and the story was basically the same—effective, long-run lubrication.

**Material Savings—Improved Operations**

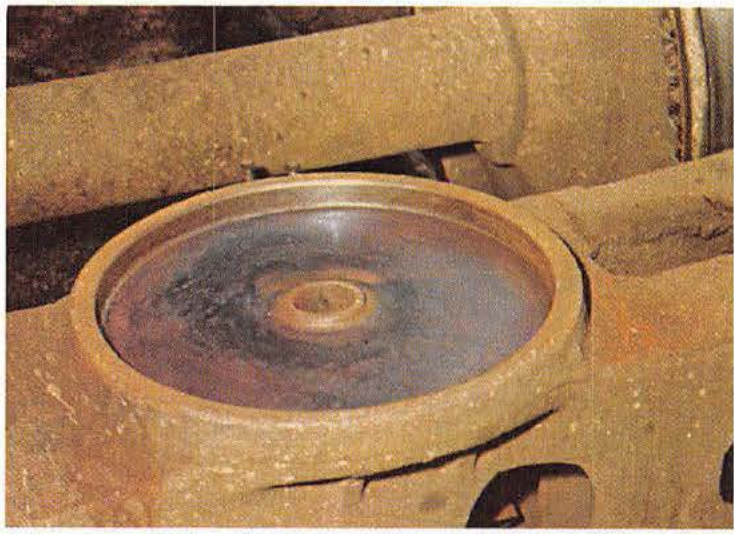
Effective, reliable lubrication is only one of the reasons why so many roads are switching to this Shell product. Material costs are significantly lower because you don't use as much of the Shell lubricant as you do grease or loose pellets. But the greatest saving is keeping expensive, revenue-producing equipment operational. Think about that.

When a center plate is balky, the wheel flanges tend to climb the rail when rounding a curve. In extreme cases, this can cause derailing. Shell Center Plate Lubricant helps protect against this hazard and keep trucks moving freely. This, in turn, reduces wear on the wheel flanges and rail sides. Result: wheels and rails last longer.

You really ought to think about these discs for center plate lubrication. They're clean. Easy to apply, even in freezing weather. Car men are sure to use them because they're so much simpler to apply and accurate to measure than grease or loose pellets. One man can service 20 to 30 cars from a single pail of Shell discs. The cumulative savings in time and manpower could be important for you.

Only seconds are needed to position Shell discs. No mess, no guessing about the proper amount to apply. One man carrying a 15-lb. pail of about 240 Shell discs can lubricate 20-30 cars quickly.

◀ Keeping expensive, revenue-producing equipment operational is a major reason why more center plates are being lubricated with unique Shell Center Plate discs. They help keep trucks moving freely, help reduce wear on wheel flanges and rail sides.



After 17 months' service, there are no major wear spots or galling on this 100 ton coal car center plate lubricated with Shell Center Plate Lubricant. Note how the dark gray component of the lubricant has made a tightly-adhering coating on the metal. Note also how clean the flange has remained for 17 months.

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**Shell Center Plate Lubricant**

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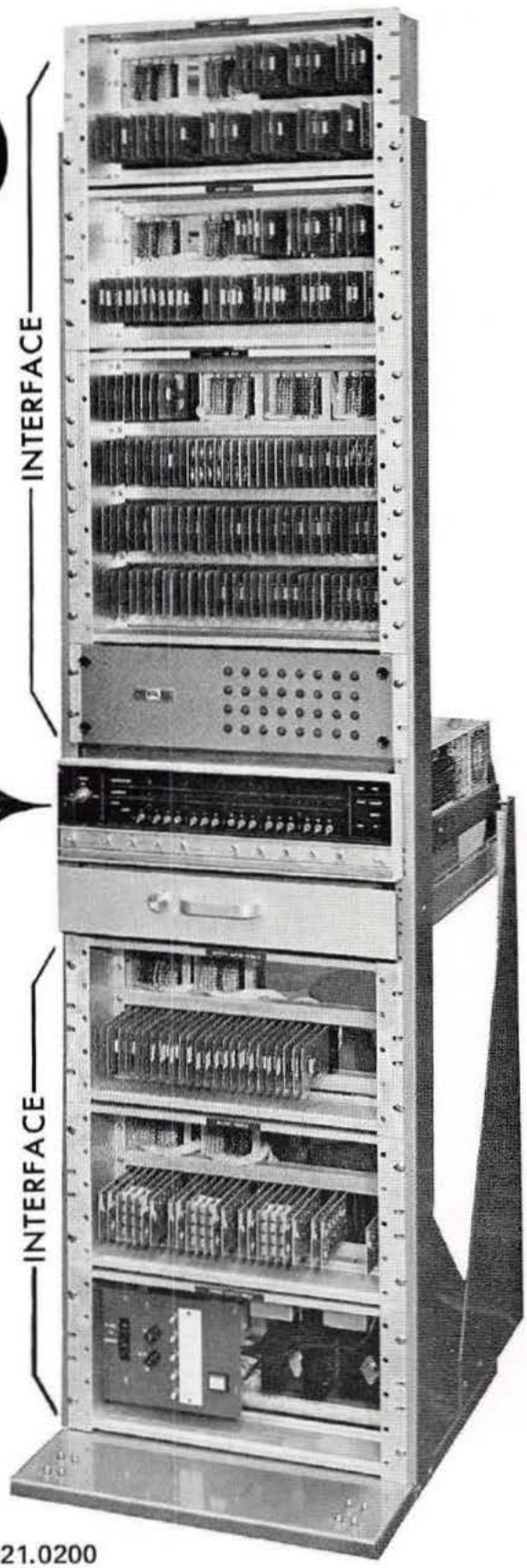


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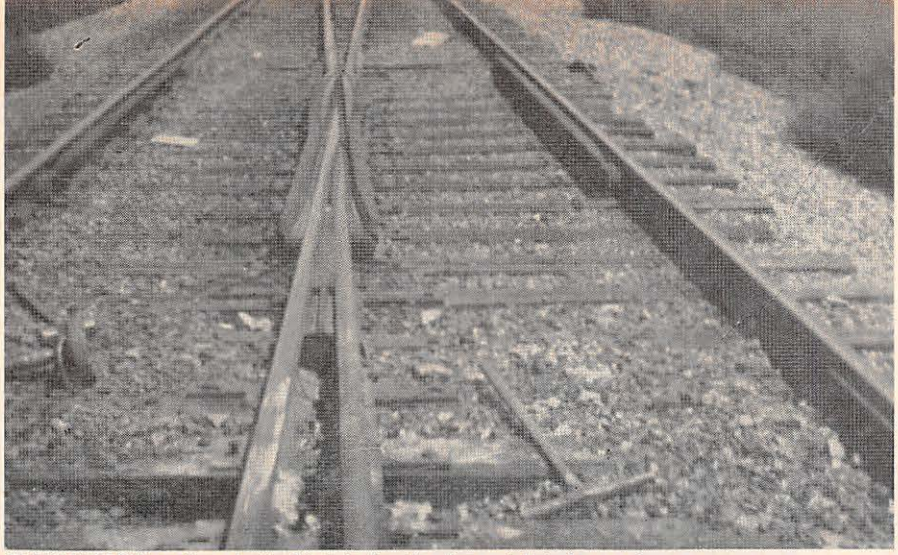

**FOUR WELDS** replace bolted joints for the frog at this turnout.

# Santa Fe to weld all frogs in 1972 program

Substitution of butt-welded joints for bolted joints in running tracks is saving railroads millions of dollars annually n track-maintenance expense. That being the case, why continue to pay the cost of maintaining bolted joints at turnouts, including those at the frog connections?

This is a question Santa Fe engineers have been asking themselves for some time. And they have been making tests aimed at finding answers. So far, results indicate that elimination of such joints is entirely practicable. Santa Fe is taking rapid steps to replace bolted joints with butt-welded joints at turnouts in conjunction with rail-relay work.

Santa Fe, a pioneer in the use of continuous welded rail, standardized on this practice for most locations in 1955. Now it is also butt-welding most second-hand rail.

In the beginning, the long strings were connected with bolted joints. In 1965 the road adopted as standard the practice of joining the strings with thermite-type welds, following extensive trial installations in 1962 and 1964. After that, it was only natural that the bolted joints at turnouts should come under close scrutiny. A major step toward eliminating these joints was made last year when the road installed 45 turnouts in which all joints in main-track rails except at the heel of the switch point and the frog connections were eliminated by use of welded rail and thermite-type field welds. This was made an established practice in the 1971 program when the joints in about 230 turnouts were similarly welded.

● **Tests give "excellent" results.** However, Santa Fe engineers were not ready yet to take the final step—that of welding the frog connections. They wanted to evaluate the performance of a test installation, made in 1967, in which a frog at Willard, N. M., was secured by thermite-type welds at all four connections. Like many Santa Fe frogs in mainline track, this was a manganese-insert frog. Further test installations on a minor scale were made in 1971. All these test installations are still in excellent condition, says Ben D. Sorrels, Santa Fe's engineer of track. On the basis of their performance, the road has decided to extend the practice of welding frogs in place to include all frogs to be installed in conjunction with the 1972 rail-relay program.

Frogs to be welded in place are to be constructed with all four legs extended 3 feet to 2½ feet beyond the standard length. The main reasons for making the legs longer are to allow the clearance needed when making thermite-type welds, and to make replacement of the frog easier.

In rail-relay territory the practice on Santa Fe is to unload both the long welded strings straight through the turnouts, with the string for the turnout side being unloaded on the outside. This string is later cut into the lengths required when constructing the turnout. Both lengths are cut at the locations of insulated joints.

New frogs and all required switch material are "packaged" at Newton, Kans., for shipment to the installation point. The legs of frogs to be welded in place are drilled for six-hole bars. The end hole is omitted. The same practice is followed with respect to the ends of long welded strings. The reasoning is that bars can be applied initially but can still have all bolt holes remote from the heat of subsequent welding.

● **Installing the frogs.** Practice on Santa Fe is to install turnouts in advance of the rail-laying gang. In-place welds are installed behind the rail gang. Hence, the new frogs are installed initially with bolted connections. In installation work the practice is to bolt a length of rail to the heel of frog and to connect this rail with the existing rail with a compromise joint.

When the switch gang finishes installing a turnout it has eight bolted joints in the main-line rails, not including insulated joints. Four of the bolted joints are temporary compromise joints, two in each direction from the turnout. In addition, there is one at the bent stock rail in front of the switch point, one at the heel of the switch point, one at the toe of the frog and one at the heel of the frog. There are also bolted connections at the heel and toe of the frog in the turnout rail. Except for the joint at the heel of the switch point, all the bolted joints are replaced with field welds by the welding gang which follows the rail-laying gang.

Why isn't the joint at the heel of the switch also welded? The reasoning, as explained by Sorrels, is that a weld there might interfere with the operation of the switch. Also, the relatively limited service life of the switch point is a factor, he adds However, the possibility of installing a weld at this connection is being investigated.

● **Renewing welded frogs.** The decision to go to welded-in frogs on Santa Fe was made in full knowledge of the fact that the service life of the frogs is generally much shorter than that of the rail in open track. It is thought this consideration can be offset because the manganese inserts can readily be replaced, and that wear in the wing rails can be corrected by welding, thus generally avoiding the need to remove and replace the entire frog.

The main purpose of installing butt welds at turnouts and frogs, as Santa Fe engineers see it, is to eliminate bolted joints and the attendant maintenance expense. However, they are convinced that fully welded turnouts can be installed at a cost equal to or less than that of a comparable bolted turnout, while at the same time providing a much improved structure with better riding qualities. As for anchorage, there is no thought of changing the pattern at turnouts. Such anchorage may serve a useful purpose in avoiding problems created by rail movement when replacing the manganese insert, Sorrels explains. ■

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# Are we designing cars for designers?

*(Continued from page 22)*

old-line vehicle manufacturers, but eventually they decided to stay in the picture." WMATA will follow the same procedure for all technical contracts.

The biggest cheer for the consulting fraternity comes from a man who had them not only design and equip his line but even set up its staff: Robert Johnston, director, construction, PATCO (Lindenwold) line. Gannett, Fleming, Corddry & Carpenter were the general engineering consultants, Gibbs & Hill the wayside and electrical consultants, and Louis T. Klauder & Associates the car and operations consultants.

Says Johnston: "They did a damn good job for us. There has been debugging, of course. But everything worked out as planned." Johnston, who won praise from *Fortune Magazine* for having a sleek, sophisticated operation, singled out Klauder for special praise.

Klauder?

He has been under specially severe criticism in recent times. What about the collision that took place just before the PATCO line opened? Klauder's fault? Johnston says no: "An error was made in laying out the block boundaries. Nobody caught it, not the manufacturers, not the consultants. So if anybody is to be blamed, it's me. It was corrected quickly, and precautions taken so that that kind of thing won't happen again."

Klauder himself rocked the industry by preparing car specs for the San Francisco Municipal Railway's 78-car streetcar order. The bid proposals, including cab signaling, digital print-outs for fares, air-conditioning and other unstreet-car-like luxuries, came in four months ago at prices around $500,000. Horrified Muni officials threw out the bids, and now want cars, minus all the extras, in the $300,000 range. They acknowledge, however, that they were as keen to get the extras as Klauder was to specify them.

Klauder concedes that it was a bit rich for a streetcar; otherwise, criticism leaves him unruffled.

"Remember," he says in his rapid-fire manner, "that it was a fairly small car order and there are high fixed costs. Also an inflation factor. Also enough warranties. Air conditioning? People expect it nowadays. And 65-mph speeds aren't so sophisticated when you know that BART will do 80.

"I'll bet you hear plenty of criticism of me," he laughs. "Sometimes they're right. There were bugs on the Long Island cars, but they're going fine now. I've been accused of not inspecting every wire.

"Lindenwold? We did it from scratch. The Metroliners? A lot more automation than in the past. Motors falling off. Problems with the transformers. That's what happens whenever you push beyond what you've been doing. And the manufacturers had been doing it for 20 years.

"There is no question that there has been a big jump in technology. Cars were relatively unsophisticated in performance and automation, both motors and gears. Performance was the same for 30 years. New York did most of the buying, so standards were keyed to New York. Since the Federal government started, in effect, buying cars, they are no longer being bought to those standards."

Klauder's bullet-like delivery continues: "They say I write performance specs that are too vague. It's true, it's not like the old New York Red Book, that specifies the size and thread of every nut and bolt, the materials. I believe in giving the manufacturer his head, but putting tough specs on the guarantees.


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Additional information concerning the U.S. Department of Transportation High-Speed Ground Transportation Test Track is available in the September 13, 1971, issue of *Railway Age.*

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Circle 20 on coupon page 33

The less detailed the spec, the more you put in the warranty. We're holding their feet to the fire, and they don't like it." Then, changing the metaphor, he chuckles, "But we're all in bed together, and we might as well get along."

Another angle on the Metroliner troubles comes from Jack Shepard, very senior at consultants Gibbs & Hill. Says Shepard: "DOT didn't act as system manager on the cars as they should have. We were retained by the Pennsylvania [now Penn Central], and we foresaw current collection problems. We said the last pantograph would become a ball of fire. And it did."

"Bear in mind," he goes on, "a consultant can only push. He can't lead. Our typical problem is marrying the starry-eyed requirements of planning groups with realistic manufacturers' capabilities.

"All these operating bugs you hear about," he says, "are no different from what we see in computer installations, aerospace and utility power generation. But in those fields, there is less interface with the final customer. A sub-station failure in Idaho is not like a commuter car stalled in a New York tunnel."

In effect, what these consultants, and others besides, are doing is shifting the ball back to the suppliers' court. By and large, they are saying that it is the suppliers that are gradually catching up with new technology, and a somewhat bumpy transition period is inevitable.

A stock criticism of the consulting fraternity is that it lacks operating and management experience in the transit field. This is not invariably true. There is Gerard Spencer, vice president of Coverdale & Colpitts, who used to be chief of rail planning at PATH. Now doing consulting work for Boeing's Vertol Division, Spencer says: "It's not aerospace technology that the transit industry needs so much as aerospace disciplines—their analytical techniques as well as their fabricating methods."

Walter S. Douglas, chairman of Parsons Brinckerhoff, Quade & Douglas, points out that PBQ&D retains Don Hyde (former general manager, Cleveland Transit System). What's more, the Parsons-Brinckerhoff-Tudor-Bechtel joint venture serving Bay Area Rapid Transit numbers not only Hyde on its advisory council, but CTA's Keiser and Toronto's Paterson.

Douglas dismisses rumors of troubles getting BART ready as "vague and irresponsible." They had a collision on a test run last month, but the train was being run manually, not with its automatic train control system.

As for production troubles with the cars, Douglas says: "The truth is that we did write into the specifications that the difficulties would be resolved before acceptance. The system WILL work."

So all in all, the consultants are not lacking in sharp comebacks to their critics. They are vulnerable to criticism in other areas, for example, beating the bushes for publicly financed study contracts. But as PATCO's Bob Johnston says bluntly: "So are the manufacturers. So are we. Who isn't?"

The consultants haven't led the fight for component standardization that could help hold the line on car prices. But as Gibbs & Hill's Shepard pointed out, a consultant can propose, he cannot dispose.

Most serious of all, what one person calls a spec with "wide latitude," somebody else damns as simply no spec at all.

But it doesn't have to come down to making a choice between the people in one camp or the other. Judgments about consultants will still need to be made on a case-by-case, not blanket, basis.

The experts can and do stumble. But so long as they are willing to recognize this and quit confusing themselves with mandarins, it is no cause for a war. ■

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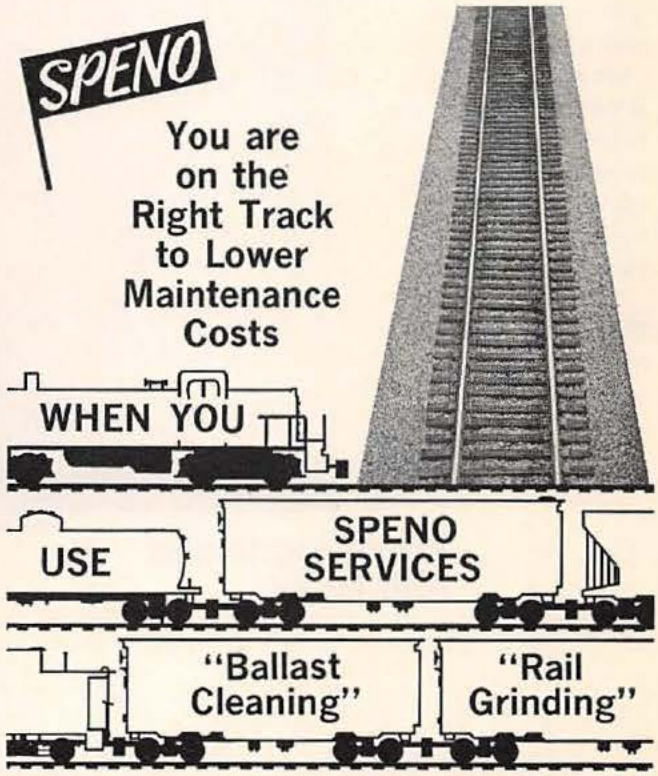


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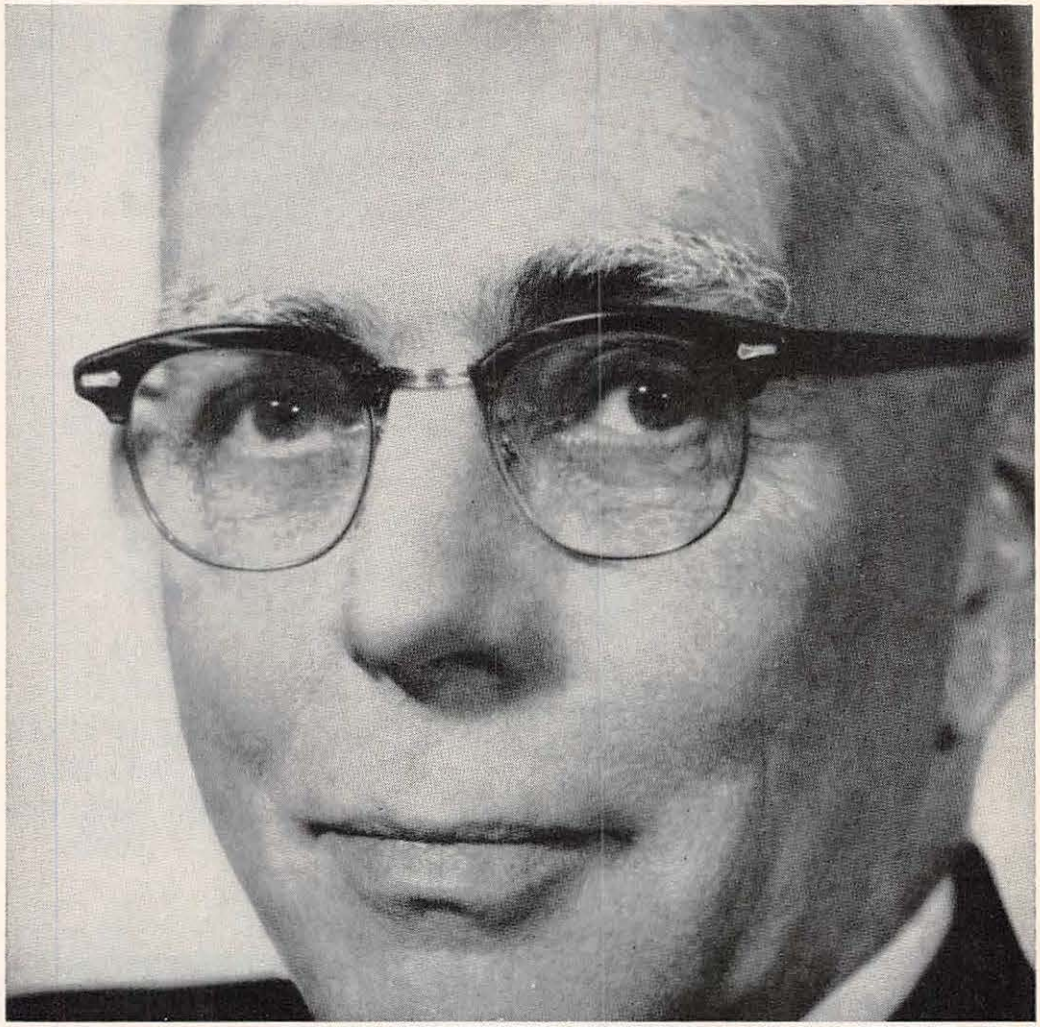

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**I expect** the members of my staff to be as fully informed on railroad matters as I try to be. So all of us read Railway Age, which provides much interesting as well as useful information. That is why each Department of the Long Island Railroad is provided with its own copy - and each copy has a "required reading" routing slip.

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President

## The Long Island Rail Road

# Market Outlook

## CARLOADINGS

Loadings of revenue freight in the week ended Nov. 27 totaled 412,125 cars, according to the Association of American Railroads. This was a decrease of 59,844 cars, or 12.7% compared with the previous week, and a decrease of 32,307 cars, or 7.3% compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended Nov. 27 are estimated at 12.1 billion, a decrease of 4.4% below the corresponding week of 1970.

REVENUE FREIGHT CARLOADINGS

| Commodity | Nov. 27 week | Nov. 20 week |
|---|---|---|
| Grain | 20,802 | 32,156 |
| Farm products | 17,884 | 16,913 |
| Metallic ores | 22,895 | 26,619 |
| Coal | 73,181 | 62,779 |
| Crushed stone, gravel & Sand | 21,099 | 26,863 |
| Nonmetallic minerals | 8,324 | 10,137 |
| Grain mill products | 15,932 | 18,710 |
| Food & kindred products | 21,245 | 24,374 |
| Primary forest products | 20,800 | 25,150 |
| Lumber & wood products (except furniture) | 13,356 | 16,109 |
| Pulp, paper & allied products | 20,589 | 23,075 |
| Chemicals & allied products | 21,964 | 26,001 |
| Petroleum products | 8,093 | 9,442 |
| Stone, clay & glass products | 15,186 | 18,521 |
| Coke | 5,386 | 6,228 |
| Metals & products | 16,364 | 18,788 |
| Motor vehicles & equipment | 20,546 | 24,682 |
| Waste & scrap materials | 10,818 | 13,390 |
| Forwarder & shipper assn. traffic | 5,464 | 6,776 |
| All other carloads | 51,788 | 64,612 |
| LCL traffic | 409 | 634 |
| Total cars loaded | 412,125 | 471,959 |

| CUMULATIVE TOTAL, 48 weeks | 1971 | 1970 | 1969 |
|---|---|---|---|
| | 23,404,701 | 25,273,709 | 26,208,735 |
| Estimated revenue ton-miles (billions) 48 weeks | 680.4 | 710.0 | 711.9 |

## PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended Nov. 20 totaled 25,057 cars (1.7% below the corresponding week last year) and 41,175 trailers or containers (up 2.0% from 1970). Cumulative volume for the first 47 weeks of 1971 is 1,083,617 cars (off 6.1% from last year) and 1,776,652 trailers or containers (down 4.5% from 1970). In addition to freight, 2,839 cars carrying 4,531 trailers or containers of mail and express traffic were handled piggyback. Cumulative figures for the first 47 weeks of 1971 are 140,368 cars (down 16.9% from the 1970 total), and 213,860 trailers or containers (down 16.5% from 1970).

## IN CANADA

| 7 days ending | Tons of Revenue Freight | Cumulative Totals |
|---|---|---|
| Nov. 14, 1971 | 4,194,812 | 185,840,398 |
| Nov. 14, 1970 | 4,346,086 | 181,950,444 |

## FREIGHT-TRAIN CARS

● *Orders and deliveries.*—Orders were placed for 7,473 new freight cars in October, compared with 1,534 in September and 3,153 in October 1970. New cars on order and undelivered on Nov. 1 totaled 25,863, compared with 23,113 on Oct. 1 and 20,021 on Nov. 1, 1970.

## FREIGHT TRAIN CARS ORDERED AND DELIVERED AND BACKLOG OF ORDERS

**DELIVERED**

| | Oct. 1971 | Sept. 1971 | Oct. 1970 |
|---|---|---|---|
| Built new by car builders | 4,569 | 4,144 | 3,794 |
| Built new in R. R. shops | 296 | 557 | 880 |
| Built new—total | 4,865 | 4,701 | 4,674 |
| Rebuilt | 410 | 710 | 1,244 |
| **TOTAL DELIVERED** | **5,275** | **5,411** | **5,918** |

**ORDERED**

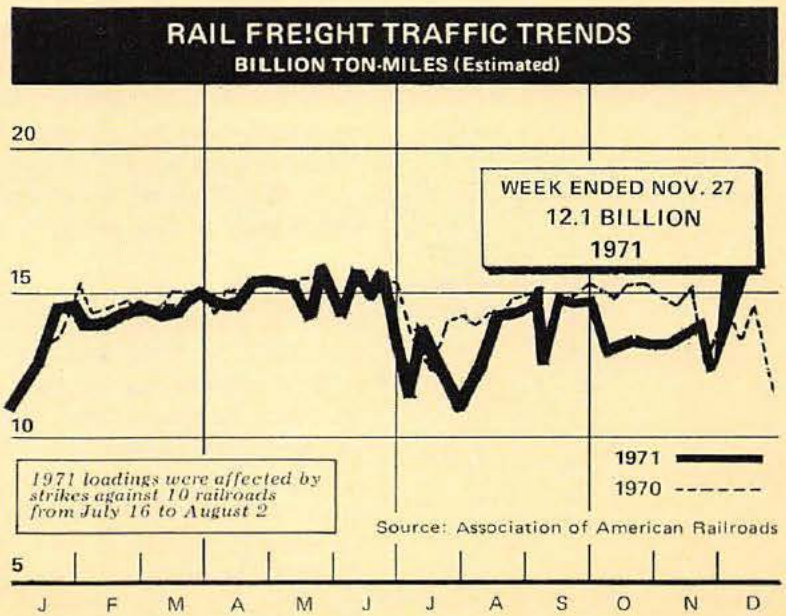
| | | | |
|---|---|---|---|
| To be built new by car builders | 6,873 | 1,534 | 2,616 |
| To be built new in R. R. shops | 600 | 0 | 537 |
| To be built new—total | 7,473 | 1,534 | 3,153 |
| To be rebuilt | 500 | 380 | 418 |
| **TOTAL ORDERED** | **7,973** | **1,914** | **3,571** |

**ON ORDER AND UNDELIVERED**

| | Nov. 1, 1971 | Oct. 1, 1971 | Nov. 1, 1970 |
|---|---|---|---|
| To be built new by car builders | 22,426 | 19,880 | 16,321 |
| To be built new in R. R. shops | 3,437 | 3,233 | 3,700 |
| To be built new—total | 25,863 | 23,113 | 20,021 |
| To be rebuilt | 2,092 | 2,001 | 3,589 |
| **TOTAL ON ORDER** | **27,955** | **25,114** | **23,610** |

## TRANSIT

● *Massachusetts Bay Transportation Authority.*—A joint venture bid of $2,369,515, submitted by Lord Electric Co. and Massachusetts Electric Construction Co., was the apparent low bid received by MBTA for furnishing and installing electrical substation equipment in connection with construction of MBTA's Haymarket-North rapid transit extension.



# MOVING PEOPLE

**Buffalo moves ahead with transit plans**

Rejection by New York voters of a proposed $2.5-billion bond issue has not affected the plans of Buffalo, N.Y., for a rapid transit system. Buffalo sources emphasize that the N.Y. State Legislature has made a firm commitment of $86 million to the Niagara Frontier Transportation Authority—irrespective of the bond issue, which went down to defeat Nov. 2 (RA, Nov. 9, p. 8). NFTA directors are encouraged by the fact that the bond issue, though defeated statewide, was given a 51% favorable vote in Erie County, and a 55% vote in Buffalo.

**New York City seeks maintenance subsidy**

Facing an operating deficit of $145 million for the fiscal year that began July 1, New York City Transit Authority is looking to Washington for aid. Dr. William J. Ronan, chairman of the Metropolitan Transportation Authority, has urged maintenance subsidies in talks with DOT Secretary John A. Volpe. The formula proposed by Ronan would provide $110-to-$120 million a year for New York. Ronan's argument is that the Federal government is subsidizing the rights-of-way of highway, air and water carriers, and should do no less for mass-transit carriers.

**Metropolitan Toronto due for additional rail transit**

First the deputy minister of Ontario's Department of Transportation and Communications warned that the Province's motor vehicle registrations are growing so fast Ontario cannot afford to keep on providing urban road space for autos, adding that "we have to get public acceptance . . . for disciplining of motor traffic . . . [and] for a higher priority for public transit." Then Metro Chairman Albert Campbell said that new attention is being paid to Toronto area rail lines of Toronto Transit, CP Rail and Canadian National as the basis for a high-speed transit network. First priority for GO (Government of Ontario) Transit operation are three rail lines where brand-new commuter service could begin by late 1972 or early 1973.

**37 Senators urge Nixon to free transit funds**

UMTA's backlog of applications for Federal transit aid currently add up to $2.6 billion—yet, the Nixon Administration has decided to allocate only $600 million of the $900 million which Congress has authorized for disbursement in fiscal 1972. Thirty-seven Senators, led by Senators Case and Williams of New Jersey, have urged the President to spend the full $900 million, of which $810 million has been earmarked for capital grants. They told President Nixon in a joint letter: "Mass transit stands at a critical juncture. Without adequate support from the Federal government it surely will fail in the vital job which only it can perform."

**New Jersey opens Metropark station**

Metropark, a suburban park-and-ride station occupying a 12.4-acre site in northern New Jersey's Woodbridge Township, opened for business Nov. 14. That was the day Amtrak increased the number of Metroliners operating between New York and Washington from nine to 12. Six southbound and five northbound Metroliners, as well as conventional trains, will serve Metropark. DOT Secretary John A. Volpe says Metropark is designed as "a major test of public reaction to improved intercity rail services in that portion of the Northeast Corridor." The total cost of $2,617,000 was shared by the Federal Railroad Administration, the Federal Highway Administration and the State of New Jersey.

# BOOKSHELF

**ON THE MAIN LINE (The Pennsylvania Railroad in the 19th Century),** by Edwin P. Alexander. Here is a great photographic documentary on Pennsylvania Railroad lines east of Pittsburgh. The text is scant, as it would have to be in a volume so profusely illustrated. The captions provide a running commentary as the photographs take the reader westward over the Philadelphia, Middle and Pittsburgh division main lines of the PRR—as well as across a few of the lesser divisions and predecessor railroads—in the days before 1900. Many rare photographs—not previously, or only occasionally heretofore, published—are included. Unlike so many railroad books of today, the pictorial emphasis is on the right of way and structures rather than on locomotives and rolling stock. The book makes an excellent companion to the sparsely-illustrated but infinitely-detailed 835-page "Centennial History of the Pennsylvania Railroad Company" published by the railroad itself in 1949. *310 pages; 367 illustrations; Clarkson N. Potter, Inc., New York; price: $15.*

**UNION PACIFIC COUNTRY,** by Robert G. Athearn. This book, says the author—who is a professor in the history department of the University of Colorado at Boulder—"is not intended to be a history of a railroad company, but rather one chapter in the larger story of how the American West was penetrated, settled and developed with the aid of steam and iron."

"The principal problem I faced," Dr. Athearn's introduction says, "was that of recounting the growth of a railroad empire made up of a great many lines, large and small. The country they served stretched from the Missouri River to the Pacific Northwest and from Texas to Montana. By the early 1900s it would involve Nevada and California, when the Los Angeles to Salt Lake City line was included, and for a brief moment would include the whole Southern Pacific system . . . To make the story as manageable as possible, I decided to concern myself principally with what might be thought of as the pioneering period of the company's history, or, to put it another way, the pre-Harriman era. Even within that scope, choices had to be made. I elected not to dwell heavily upon the original construction aspects, since that has been done many times, but rather to take the point of view of those contemporaries who waited patiently in the West for the coming of the railroad." *480 pages; 54 illustrations and 7 maps; Rand McNally & Co. (Chicago, New York and San Francisco); price: $15.*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**Advertising closing date: January 17.**

George R. Wallace
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(*Continued from page 42*)

development, Mobile, Ala., appointed assistant vice president—industrial development.

**V. V. Cummins,** assistant general rate manager, Mobile, retired Dec. 1, after 46 years in the GM&O traffic department. **C. R. Ashworth** promoted to district traffic manager, Southfield (Detroit), Mich. **G. R. Parker,** chief of tariff bureau, Mobile, retired Oct. 1, after 51 years of service.

**PACIFIC FRUIT EXPRESS.—L. A. Longtin,** general superintendent, appointed manager—car service, Chicago. **W. J. Elms,** superintendent—car service, appointed assistant manager—car service. **J. J. LoBianco,** special representative—traffic department, appointed manager perishable charges and divisions. The former titles of Messrs. Longtin, Elms and LoBianco abolished.

**PEORIA & PEKIN UNION.—G. L. Crothers** appointed general agent, Peoria, Ill., succeeding **C. P. Grauer,** who retired Oct. 31, after more than 47 years of service.

**SOUTHERN PACIFIC.—D. L. Praeger,** assistant general auditor, San Francisco, has assumed supervision of the accounting functions of **R. C. Hollinger,** who retired Nov. 30, after over 47 years of service.

**PENN CENTRAL.—George R. Wallace,** assistant vice president—coal and ore, Philadelphia, appointed vice president—sales and marketing—staff. **Charles H. Wolfinger,** director coal and ore sales, succeeds Mr. Wallace as assistant vice president—coal and ore.

**ST. LOUIS SOUTHWESTERN. — H. W. Wood,** assistant master mechanic—cars, Pine Bluff, Ark., named master car repairer there and is succeeded by **H. H. Cates.**

**SOUTHERN.—M. Daniel Berman,** senior operations analyst, appointed assistant director, car distribution and utilization, with headquarters as before at Atlanta, Ga. **Herbert R. Jones** named senior operations research analyst, Atlanta.

**Luther A. Barnes** appointed senior cost analyst, Washington, D.C. **Philip E. Corbin** named cost analyst and **John C. Klick,** assistant cost analyst.

## OBITUARY

**Bernard J. Yelin,** 69, retired president, **International Car Co.,** Buffalo, N.Y., died Nov. 27.

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# Viewpoint

## Do we really need an "Amtrak approach" to freight?

The proposition that railroad affairs are best managed by railroad men is hardly a novel one; and it would not seem to require defending. The fact that it *does* need defending underscores the failure of important government and Congressional leaders to understand the "railroad problem" that they are now grappling with.

As AAR President Stephen Ailes pointed out in a Dec. 1 speech there has arisen in Washington "the notion that the Amtrak formula is a solution to all railroad problems—the idea that the creation of an independent, non-railroad-controlled, government corporation backed by Federal funds, operating independently of the railroad industry, is the way to solve railroad problems." Underlying this notion said Ailes, is "the unspoken assumption that the industry cannot be relied upon to take appropriate collective steps to solve its problems."

The AAR president asked: "Is there any justification for an Amtrak approach in the freight business—a business which the railroad industry wants desperately to improve and expand? I do not believe so. Yet, we have before us the current version of S. 1729, the so-called Fastcor bill. Up to $3 billion of Federal credit is committed to freight car purchases, a sum that would produce a welcome addition to the freight car fleet. But, again, a government corporation is created, this time with three railroad directors out of a board of eleven. All arguments to the effect that the corporation should be controlled by the railroad industry are so far firmly rejected. It seems as if any non-railroader is better equipped to decide what freight cars should be bought, where they should be directed, and so on."

The Amtrak approach even to the passenger business is right now in great dispute. While Ailes was temperate in his own comments about Amtrak, he did point out that the railroads would have preferred, and had urged, the solution that appears to be working well in Canada, where railroads are permitted to discontinue money-losing trains unless public funds make up the deficit.

While we join the AAR in wishing Amtrak all success, we believe its chances would be better if it enjoyed the services of more men who know what trains are all about. In any event, its performance so far does not suggest that an "Amtrak approach" to the freight business will be the best possible news for freight customers.

In point of fact, the railroad freight business is, by and large, thriving; freight railroads are, on the whole, extremely well run. Some railroads are in difficulty, the first victim of the malaise created by generations of unfair government policies; it is the correction of these policies that railroads now want.

### NOT A TERMINAL CASE

Perhaps the single most cogent comment which Ailes made was this: "This industry is considerably stronger than the public or, indeed, than Congress, thinks it is."

As reported elsewhere in this issue (p. 10) Ailes made a good beginning toward setting the record straight. It is time that all railroaders let their Congressmen know that the industry's strengths far outnumber its weaknesses—that while it is ailing, it is not a terminal case.

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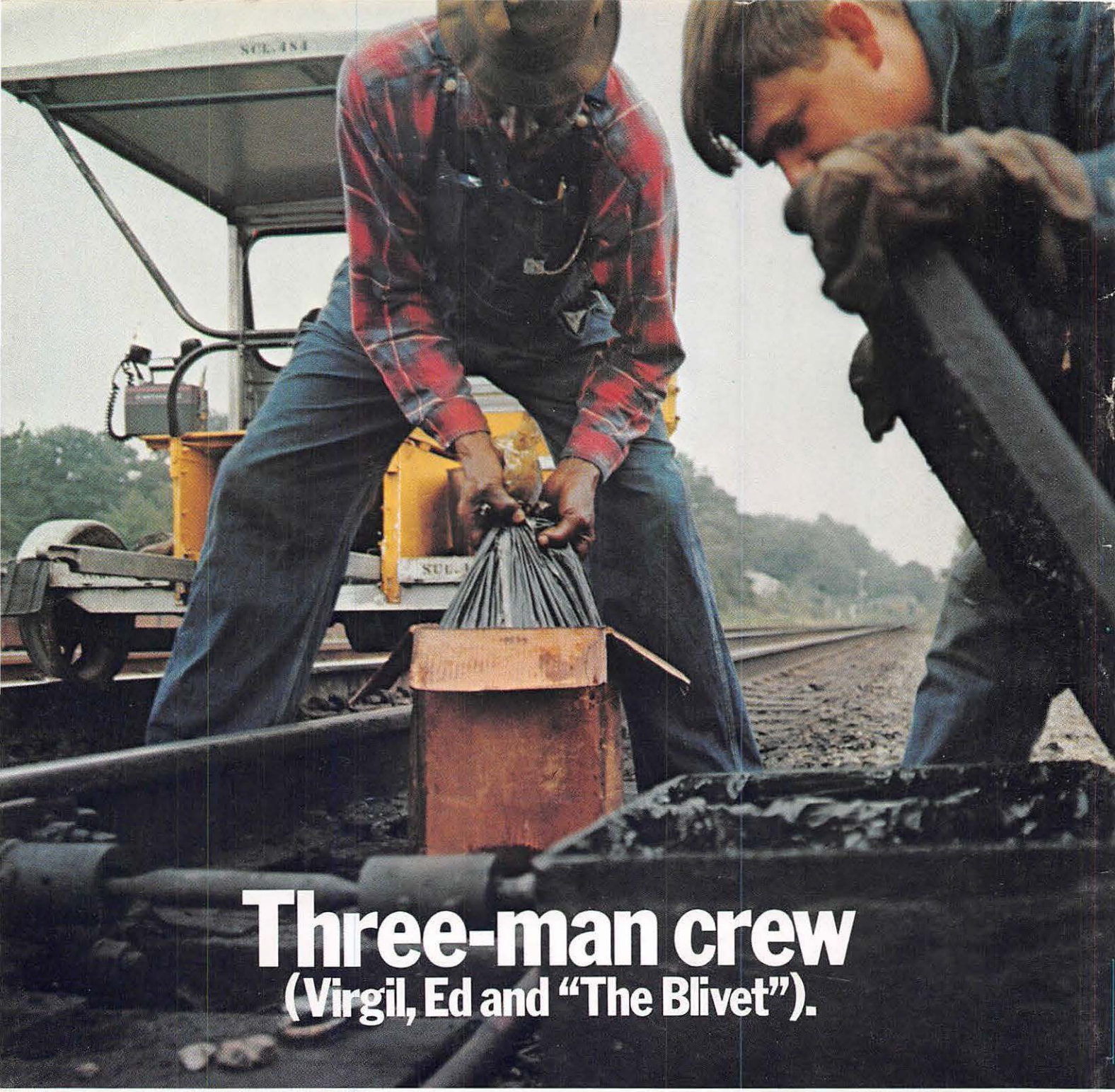

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